DIGITAL VIDEO RECORDER
USER MANUAL

Model: THR04/08

Safety Precautions

- Turn off the power of the product before installing the product. Do not plug many plugs into one outlet
  - It can cause an electric shock or a fire.
- Do not put any containers with liquid such as water, coffee, beverage etc. on top of the product.
  - It can cause a fire, an electric shock or a product problem.
- Do not put any heavy object on top of the cable or excessively bend the cable.
  - It can cause a fire.
- When wiping the surface of the product, do not use water, chemical or detergent, and always use a dry towel.
- - It can cause an electric shock, problems or scratches to the surface of the product.
- Do not install the product where the level of humidity, dust or smoke is high.
  - It can cause an electric shock or a fire
- When unplugging the power, hold the plug and unplug slowly. Do not hold the plug with wet hands or plug to a loose power outlet.
  - It can cause an electric shock or a fire.
- Do not disassemble or reconfigure the product. Because high level of current flows on the device, it is dangerous to do so.
  - It can cause a fire, an electric shock or an injury.
- Always check for dangerous elements where the product is installed. If dangerous elements (Moisture, damaged cable, unstable installation etc.) are identified, please contact your nearest service center.
  - It can cause an electric shock or a fire.
- Because the cable connected to this device can be damaged, keep at least 15cm of clearance between where the product is installed and where the power outlet is.
  - It can cause a fire, an electric shock or an injury.
- Install the product in a cool location not exposed to direct sunlight. Do not install the product where traffic is high or near the heating devices.
  - It can cause a fire.
- Install the product on a location with a flat surface where it is ventilated well and not too high.
  - It can cause a problem or an injury.
- The power outlet must be grounded and the voltage range must bet within 10% of the rated voltage. Do not share the power outlet with hair dryer, iron, refrigerator or heating device etc.
  - It can cause an explosion.
- When replacing the battery, always replace with the same type of battery as the one provided. When disposing the battery, follow the direction of the manufacturer.
  - It can cause an explosion.
- For old hard drives, you may not be able to recover the data stored on the drive. When you use a damaged hard drive, you will see a sign on the screen saying "Error or defective". For the old hard drive, contact your nearest service center or the original retailer to replace the hard drive.
  - We do not responsible for the data loss from misuse by the user.

CAUTION

RISK OF ELECTRIC SHOCK. DO NOT OPEN.

CAUTION! TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Explanation of Two Symbols

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

THE GRAPHIC SYMBOLS WITH SUPPLEMENTAL MARKING ARE ON THE BOTTOM OF THE SYSTEM.

"WARNING – TO PREVENT FIRE OF SHOCK HAZARD, DO NOT EXPOSETHE UNIT TO RAIN OR MOISTURE"

FCC CLASS A NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Caution

Please read the following precautions carefully before installing the product and follow the directions for installation.

- Do not install the product where the level of humidity, dust or smoke is high.
- Do no install the product where it is exposed to direct sunlight or close to the heating device.
- Do not install the product where there is danger of electric shock or near magnetic object.
- Do not install the product where the temperature is too high (40°C or above) or too low (0° or less).
- Do not put objects with high conductivity on top of the ventilation outlet of the product.
- Make sure the power is turned off before installing the product.
- Secure sufficient space to connect the product when installing the product.
- Do not install the product where it is not flat, not ventilated well or where vibration is severe.
- When you install the product near electronic appliances such as radio or TV, it can cause problems to the product.
- Be careful not to let alien particles get inside the product.
  - It can cause a problem to the product.
- Install the product where it is ventilated well.
  - The product at least 15cm away from the wall power outlet because the cable can be damaged
- Do not install the product at a location close to a product or broadcast receiver with strong electric or magnetic wave.
- Do not put heavy objects on top of the product.
  - It can cause a problem to the product.
- Install the product at a flat and stable location.
  - The product may not operate normally.
- The product at a location with appropriate level of temperature and humidity.
  - Do not install the product where the temperature is too high (40°C or above) or too low (0° or less)
- Because the vibration and impact can damage the product, do not throw any objects to the location where the product is installed.
- Do not install the product where it is exposed to direct sunlight or close to the heating device.
- Firmly fixate the product at a location where it is well ventilated.
  - It can cause problems to the product depending on the surrounding environment. It is recommended to use the Automatic Voltage Regulator. It is recommended to wrap wires around the Ferrite core.
- The power outlet must be grounded.
- If you hear any noise or smell any odor from the product, turn the product off and contact your nearest service center.
  - It can cause a fire or an electric shock.
- Periodically have the product checked by the service center to safety use the product.
  - When replacing the battery, always replace with the same type of battery as the one provided. When disposing the battery, follow the direction of the manufacturer.
  - We are not responsible for the problem from misuse by the user.
- Do not move or flip the product over while using the product.

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CHAPTER 1

INSTALLATION

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1-1. Product characteristics

- Adopted the stable Embedded Linux
- Stable file system recovery even after power supply is disconnected from a power outage.
- Realized small file size and high video quality by applying the H.264.
- Supports terra byte hard disk (up to 2TB)
- Supports e-SATA port to use additional external hard disk.
- Real time recording
  - Maximum of 480IPS@352 X 240 at NTSC
  - Maximum of 400IPS@352 X 288 at PAL
- Supports various recording resolutions and qualities.
  - D1(704x480), Half D1(704x240), CIF(352x240) at NTSC
  - D1(704x576), Half D1(704x288), CIF(352x288) at PAL
  - 5 stage recording qualities (Very high, high, normal, low, and very low).
- Easy operation through various user interface and user friendly GUI system.
- Realized powerful multi-function.
  - Real time video display and recording, network transmission and back up can be performed simultaneously.
- Easy search functions.
  - Date/Time search (Calendar search), event search
- Recording before event. (Can be 5 seconds).
- Recording after event. (Can be only up 10 seconds).
- The operating condition pre-check function according to the change in motion detection and movement detection
- Can set recording quality and number of recording frames per seconds.
- Powerful recording schedule management.
- Complete synchronization of video/audio.
- Easy software upgrading through USB storage device or network.
- Maximum of 4 clients can be connected to 1 DVR at the same time.
- Band width setting is automatically set depending on the network speed connected to this device.
- Remote alarm notification via e-Mail.
- PTZ (Pen/Tilt/Zoom) operation.
- Remote control operation
- Key board control operation (optional)
- Supporting Daylight saving
- Simultaneous output to VGA and BNC

1-2. Contents

Software Installation CD

User's Manual

Screws

Mouse

SATA cable

HDD power cable

Power cable

Adapter

Reference: The type of components can be applied differently by the option.

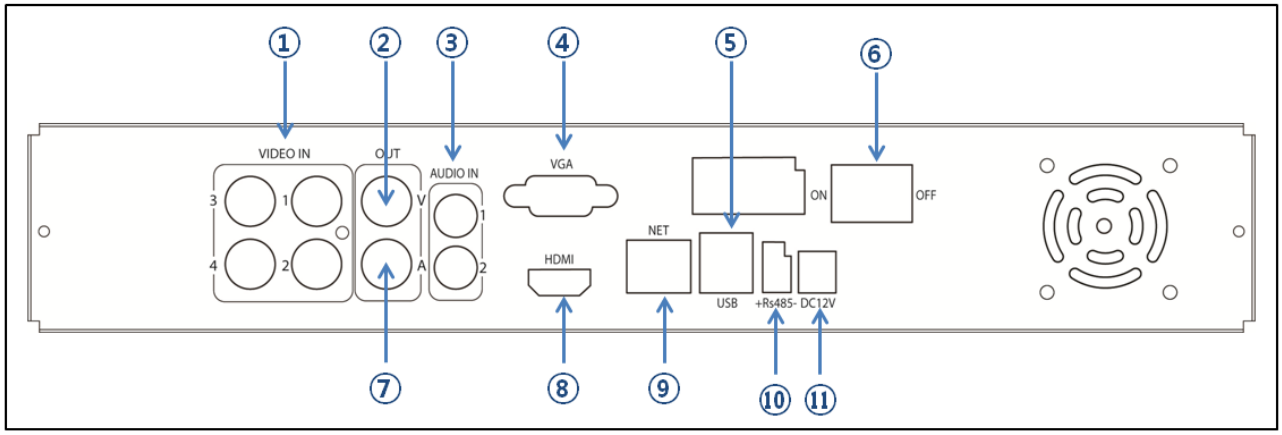
1-3. Front Panel

① Network LED : Turn on when network is connected.

② Power LED –Turn on when the power is turned on.

③ Hard disk LED – Turned on HDD is accessed.

1-4. Rear Panel



① Camera video input – Connect cameras.

② Main output port – Connect BNC type monitor. (It outputs the same video as MAIN output.)

③ Audio input port – Connect audio input port of external device.

④ VGA port – Connect VGA monitor.

⑤ USB port – Connect USB storage device and USB mouse.

⑥ Power switch – Turn On/Off Power.

⑦ Audio output port – Connect audio output port of external device.

⑧ HDMI output port – Connect HDMI monitor.

⑨ Ethernet port – Connect RJ-45 Ethernet connector. (LAN PORT).

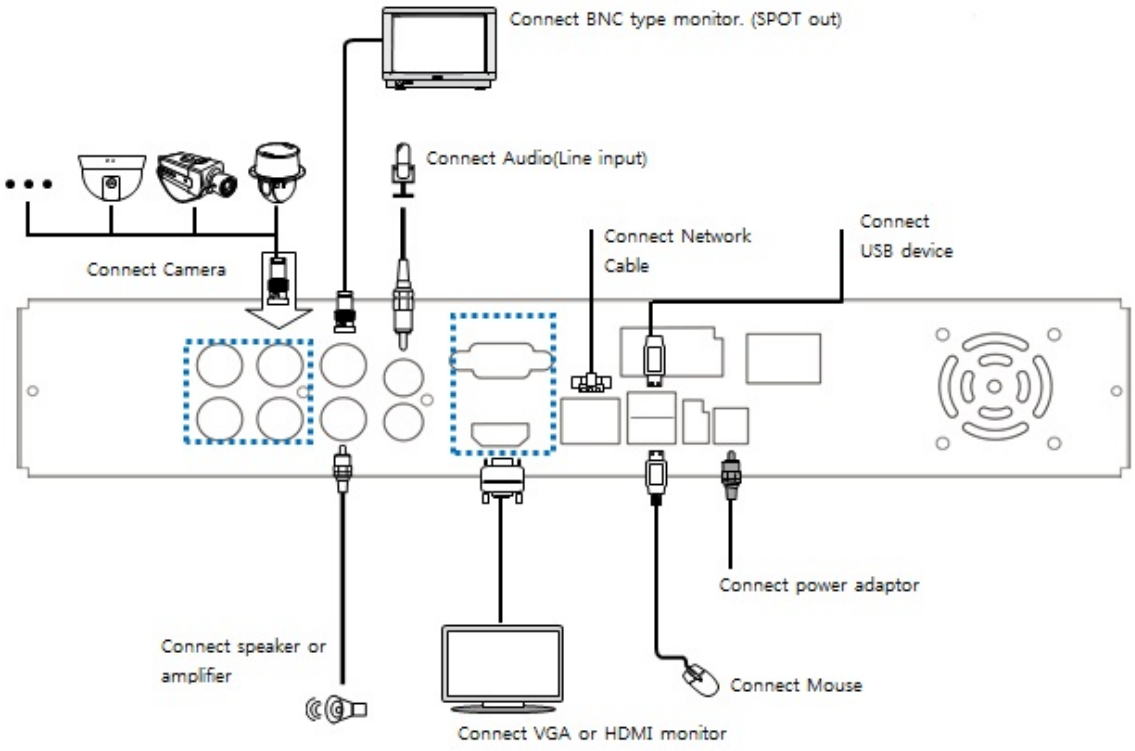
⑩ RS-485 ports – Connect RS-485 serial communication port.

⑪ DC port – Connect power adapter.

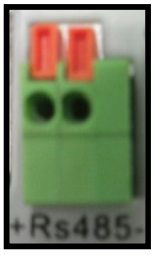
1-5. Connection and initial setting

Caution

- The camera or other external devices can be connected to this device in numerous methods. Refer to the user manual of the camera or other external device for addition information on connection methods.
- When installing the camera, check whether the power of the camera is turned off.
- After installing the monitor, turn on the power of the DVR.



1-6. RS-485 connection



① This device has 1 data port (RS-485).

② Use this port to connect the PTZ camera.

③ PTZ camera

i. Connect the PTZ serial communication cable to the RS-485 port.

ii. When connecting the cable, make sure that the TX- of the device is connected to the RX- (TX-) of the camera(keyboard), and TX+ of the device is connected to the RX+(TX+) of the PTZ camera(keyboard).

iii. Recommended initial data setting is 9600 baud rate, 8 data bits, 1 stop bit and no parity.

iv. When connecting the PTZ camera or keyboard, always change the setting of the DVR setting menu according the RS-485 setting of the camera, keyboard and this device.

1-7. Control port (output) connection

① For interface and auto control with the external sensor, the interfacing control output port (Set value from "Setup → Event → Sensor/Motion/Video loss" menu) and the "RELAY" port are connected.

② If the control device (Alarm light, amplified siren, external relay etc.) is "NC (Normal Close)" type, connect to the control output NC (Normal Close) port.

③ If the control device (Alarm light, amplified siren, external relay etc.) is "NO (Normal Open)" type, connect to the control output NO (Normal Open) port.

1-8. Internal hard disk installation

The hard disk installed inside the device is a precision device which can be damaged even with the small impact. To prevent the hard disk from being damaged, manage the device as follows.
To prevent the data loss, it is recommended to back up any important data into an external storage device.
When installing or uninstalling the hard disk, you must always turn off the power of the product.

- If the power is turned on, do not move the device.
- Do not install this device where it is too hot and humid and where the temperature change is sudden. It can cause a problem to the device.
- DO NOT pull out the plug or intercept the power supply while this device's power is on.
- When there is a power outage while the power is turned on, some data can be lost.
- Do not drop the hard drive or put any metallic object, such as coins, inside the device.
- In case of a power outage while recording, avoid adding, replacing or moving the HDD. The recorded data can be lost. In this case, turn on the power with the original hard disk that was used while the power outage occurred. And then add, replace or move the HDD.
- Because the hard disk is a high precision device, the parts inside the disk can be damaged at the slightest impact. Please read the following precautions in detail and follow the directions.
  - Do not directly put the hard disk on the desk or table. Because the parts inside the hard disk can be damaged at the slightest impact, put a thick cushion below the hard disk.
  - If you use the motored driver, the parts inside the hard disk can be damaged from the vibration.
  - When replacing the hard disk, be careful not to cause any impact to the other parts.
  - Be careful not to cause an impact from the tools and hard disk used for the installation.
- Protect the hard disk from static electricity.

Caution

This device has elements to cause an electric shock, an accident or a problem to the product. Also the hard disk may not be recognized or operated properly due to incorrect installation and setting. Therefore consult with an experienced expert technician when installing the hard disk.

1. Hard disk installation of replacement

A. Hard disk installation

After turning on the power of the device, unplug the power from the outlet.

① Loosen the screw on the left, right and rear side of the product.

② Separate the cover of the main unit.

③ Remove the screws on the bracket holding the hard disk, separate the bracket from the hard disk.

④ Install the hard disk to the bracket and tighten the 4 screws.

⑤ Connect the SATA cable to the hard disk.

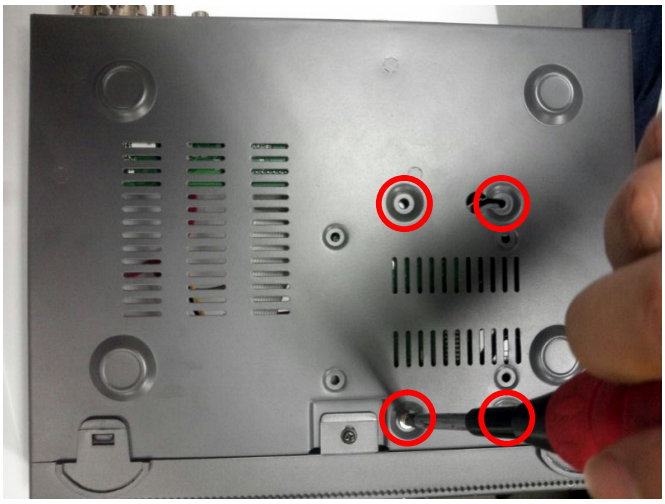
<HDD power cable>

<HDD SATA cable>

⑥ Connect the SATA cable to the SATA port of the main board.

- The SATA cable port on the main board must be connected at all times. If a hard disk is not connected, this device may not operate normally.

⑦ Tighten the screws with HDD and main unit.



⑧ Close the top cover and assemble with screw.

B. Hard disk replacement

First turn of the power of the device and then unplug the power.

① Loosen the screw on the left, right and rear side of the product.

② Separate the cover of the main unit.

③ After removing all of power/SATA cable connected to hard disk, please separate hard disk from the body.

④ In the reverse order of removing the hard disk, assemble the new hard disk.

⑤ After replacing the hard disk, turn on the power of the device.

⑥ Reference

- Each SATA cable must be connected to the connecting port precisely.
- Do not vertically put the hard disk in upright position or put other objects on top of the hard disk.
- When connecting/disconnecting the hard disk, do not use a motored tool.
- Refer to the following when adding/replacing the hard disk.

C. Recommended list of hard disk

- Hard disks of below are the ones proved to be compatible through experiment.
- Please refer to when adding or replacing the hard disk.

Manufacturer	Model name	Capacity
Seagate	ST3250312CS	250GB
	ST3500312CS	500GB
	ST500DM002	
	ST1000VM002	1TB
	ST1000DM003	
	ST2000VM002	2TB
	ST2000DM002	
Western Digital	WD5000AUDX	500GB
	WD5000AVCS	
	WD5000AVDS	
	WD5000AAKX	
	WD10EARX	1TB

Caution

When you select the hard drive in use for resetting, the video data saved previously will be deleted. Therefore you must be careful.

CHAPTER 2
Main System Application

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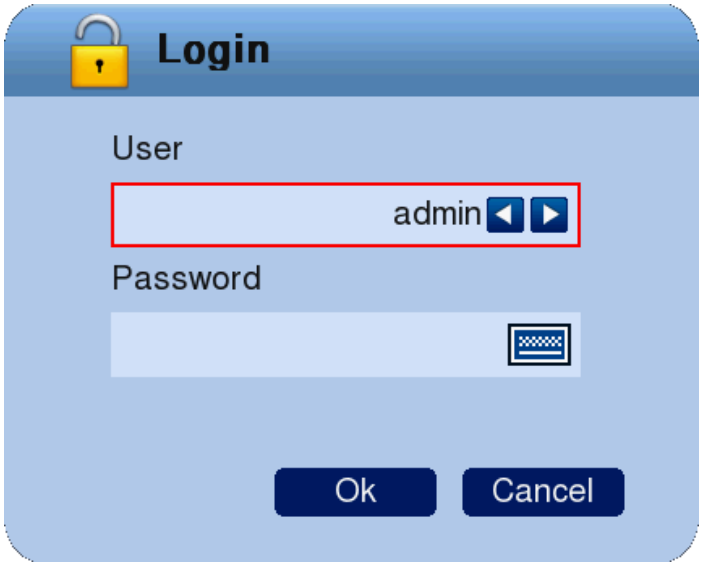
2-1. Operation

1) Start up

1. Turn on this device, then it boots with power indicator light turned on.
2. Pressing button, then the login window would be displayed. Select user and press "OK" button to continue.



① [USER]

- You may select user to login and authority is restricted by kind of user. The access rights can be set for each user.

  I. admin for system administrator (Access rights to Live, Search and Setup)
  II. user1/user2/user3 for general user (Access rights can be set by administrator)

② [PASSWORD]

- The default user and password are set to 'admin' and '000000' as shown above.
- Click password input area; you will see the screen keypad as right.

3. Input password by using virtual keypad on screen.
4. Click "OK" button to execute DVR system and you will see live screen.

2) Shutdown

1. While the status is logged in, Press button, then logout window will be displayed as below.

A. SELECTION: Select the Log Out or EXIT.

B. USER: Display current user has logged.(admin /user1/user2/user3)

C. PASSWORD: Input password.

2. Click "OK" button to "Log Out" or "DVR Shutdown"

2-2. Live Display

① [Camera name]

- Shows camera name
- If you want to modify camera name, you can do so by selecting [Setup] → [Camera] → [Channel]

② [Status icon] (OSD)

- Status icon shows current status of camera/recording.
- OSD feature

Item	Icon	Description
Camera		Audio icon
		Motion icon
		PTZ icon
Recording	C	Continuous recording
	I	Immediate recording
	M	Recording by motion
	N	No recording
	S	Recording by sensor

③ [Channel selection]

- Selected channel shows red rectangle on the edge of the screen.
- Press "OK" button on the remote controller to enlarge selected channel.

④ [Live view]

- It shows current live view as real time.

⑤ [System control toolbar - Live screen]

Notice: To hide live toolbar do right mouse click on the screen or press "live" button on the remote controller.

1) [Setup]

- Click button to enter setting menu
- Refer to Chapter "2-3 System setting".

2) [Search]

- Click button to enter search screen.
- Refer to Chapter "2-5 Search (playback) & backup".

3) [Divided screen selection]

- 1/4 divided screen can be displayed in live view.

4) [Auto sequential]

- Click button and each channel will be switched automatically.
- This function does not work at 4 divided screens.
- You can set the switching interval at [Setup] → [System] → [Overview] → [Auto-switching].

5) [PTZ control]

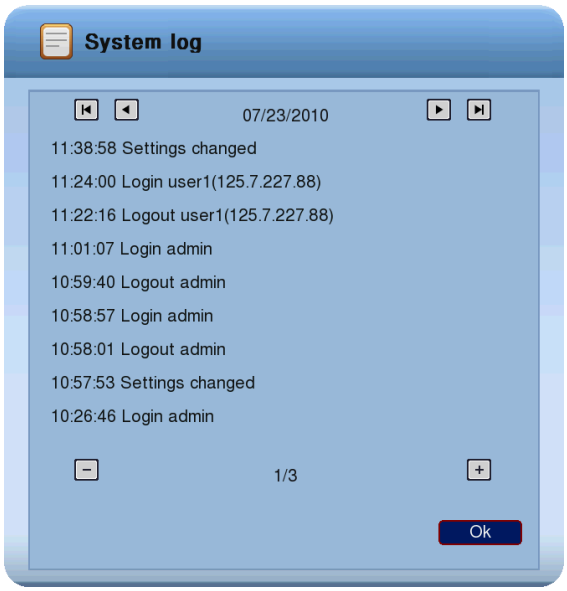
- This is the button to control the PTZ camera
- Refer to Chapter "2-4 PTZ control".

6) [Alarm on/off]

- This button is used to turn on/off the alarm output

7) [System Log]

- This shows the system log in DVR.
- Click button to show the system log list.



- You can see the log of previous date or next date by using buttons.
- You can see the previous or next log list by using button.
- Click "OK" button to close window.

8) [Information]

- It shows the system information.

9) [Login/Logout]

- It is used to login, logout or shutdown DVR.

10) [Network status display]

- It shows current connection status of network.

(Black: It shows disconnected status.)

(Blue: It shows connected status.)

- If you want to modify network settings, you can do so by selecting [Setup] → [Network] → [TCP/IP]

11) [System control toolbar - Search screen]

1) [Playback date/time]
   - It shows the date/time currently playback.
2) [Live screen]
   - Click button to enter live screen.
3) [Search screen]
   - Click button to enter search screen.
   - Refer to Chapter "2-5 Search (playback) & backup".
4) [Divided screen selection]
   - 1/4 divided screen can be displayed in live view.
5) [Event search]
   - Refer to Chapter "2-5 Event search".
6) [Backup]
   - Click this button to run backup recorded data.
   - Refer to Chapter "2-5 Search (playback) & backup".
7) [Fast backward playback]
   - Click this button to playback fast backward. The speed of fast backward playback can be set to one of the following, X2, X4, X8, and X16.
8) [Forward playback]
   - Click this button to playback forward as normal speed.
   - Live screen can be switched to playback instantly by clicking this button.
9) [Stop]
   - Click this button to stop playback.
10) [Playback]
   - Click this button to playback.
11) [Fast forward playback]
   - Click this button to playback fast forward. The speed of fast forward playback can be set to one of the following, X2, X4, X8, and X16.
12) [Frame playback]
   - Playback each frame.
13) [Playback status]
   - It shows the playback status.

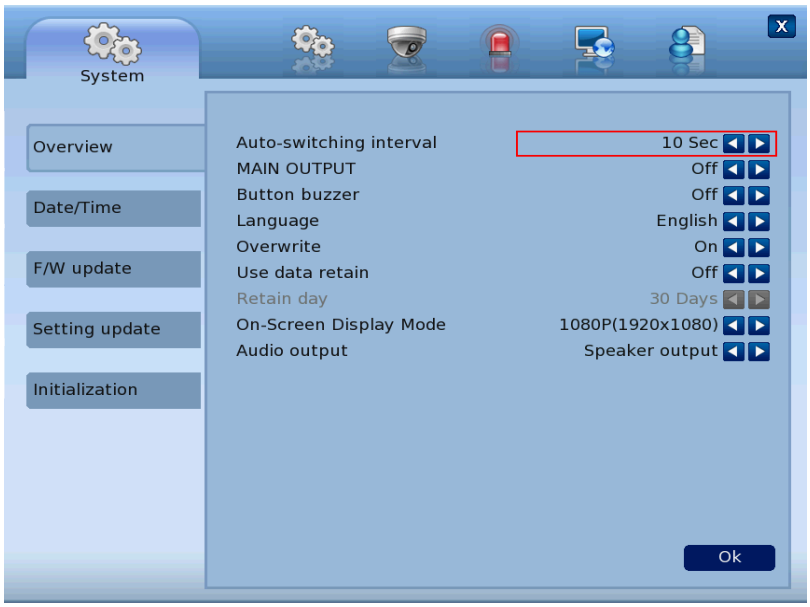
★ System control bar appears only when mouse pointer move to lower part of screen and disappear when mouse pointer is out of lower part of screen.

2-3. System Setting

System setting can be configured by setup menu. Working condition can be specified by front button / mouse / remote controller.

Only admin user can setup system configuration by menu.

1) System

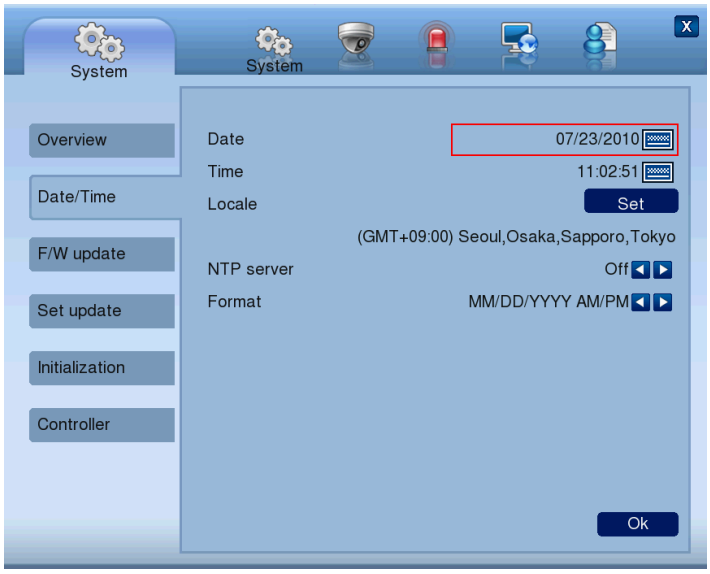


① [Overview]

- You can specify the system configuration by this menu.
- Use ◀ / ▶ button to change configuration.
  - A. Auto-switching interval: Set dwell time when auto switching function is working.
  - B. MAIN OUTPUT: Select MAIN OUTPUT On/Off.
  - C. Button buzzer: Select button buzzer on / off.
  - D. Language: Select OSD language
  - E. Overwrite: Select Overwrite On/Off.
  - F. Use data retain: Data saving period can be set.
  - G. Retain day: Select retain date 1day to 90days.
  - H. On-Screen Display Mode: Select screen resolution.
  - I. Audio output: Select Audio output.

② [Date/Time]

- Specify date and time of system.
- You can specify setting by using ◀ / ▶ button
- Select date and time, then you will see virtual keypad as below.

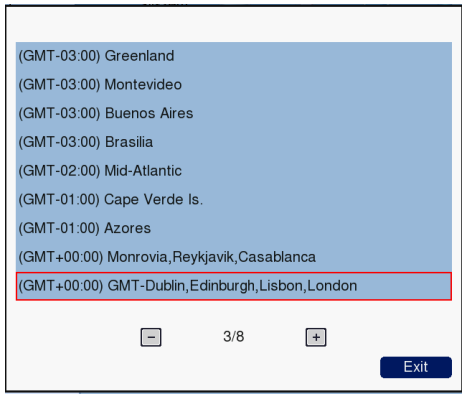


A.Date: Specify current date

B.Time: Specify current time

C. Locale: Specify locale of country.

If you click button, Set the time zone dialog box will be shown as below, and select a time zone, then click OK to change setting.



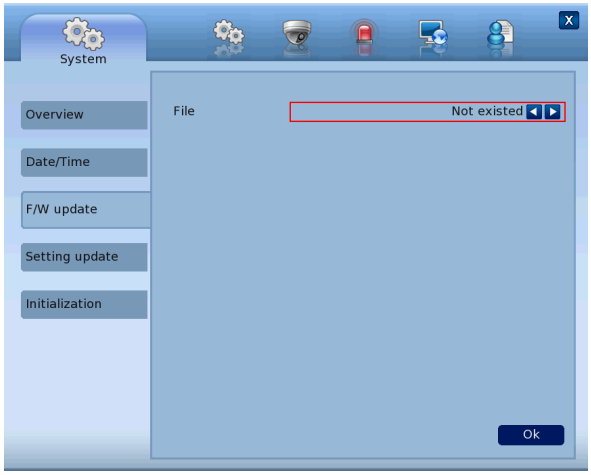
D. NTP Server: It is used to set internet time server.

※ Daylight saving time is applied automatically according to corresponding location.

E. Format: It is used to set format of date/time display

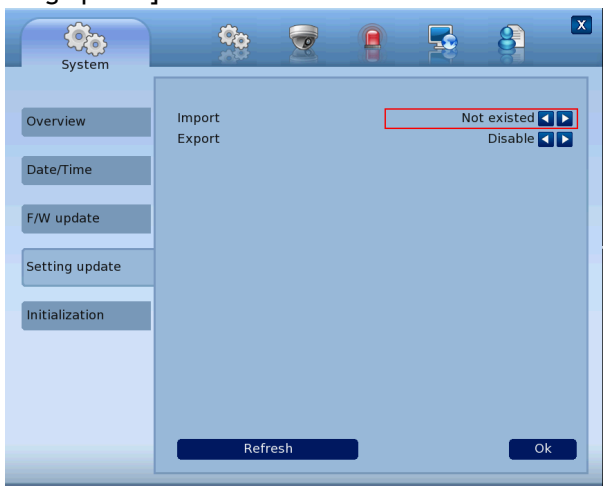
③ [F/W Update]

■ You can run firmware update.



A. FILE: You can specify the firmware file to update using ◀ / ▶ buttons.

④ [Setting update]



A. IMPORT: You can replace current setting values with new values from USB memory. (OFF/ON)

B. EXPORT: You can export current setting values to USB memory. (OFF/ON)

C. Refresh : Refresh USB memory.

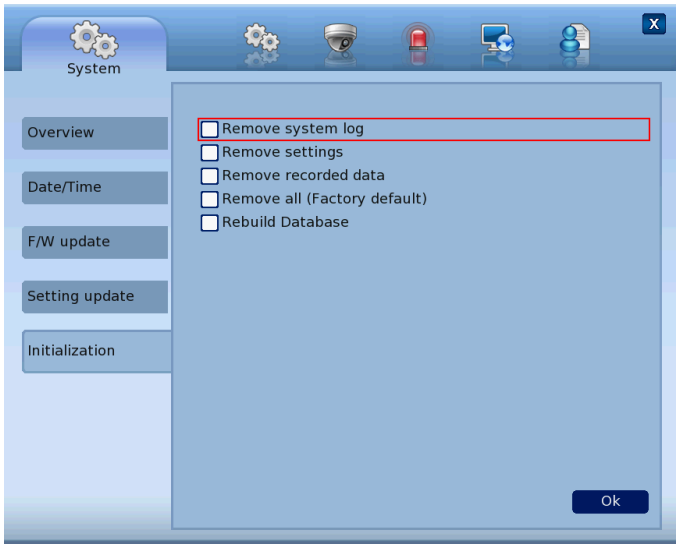
Notice

USB memory stick is needed to update F/W or settings.

It takes about 5 seconds to recognize USB memory device after connected.

"USB is not detected." Message will be shown when you are to run backup without connected USB.

⑤ [Initialization]



■ You can initialize data and configuration by this menu.

A. System log: Delete all event log.

B. Settings: Delete setting of configuration.

C. Recorded data: Format HDD data.

D. Remove all(Factory default): Delete entire data in the system and restore as factory default

- The dialog box will be shown as below at the first booting after factory default setting.
- The text in the dialog box will be shown in English as default.

E. Rebuild Database: Rebuild recording files without deleting.

Notice

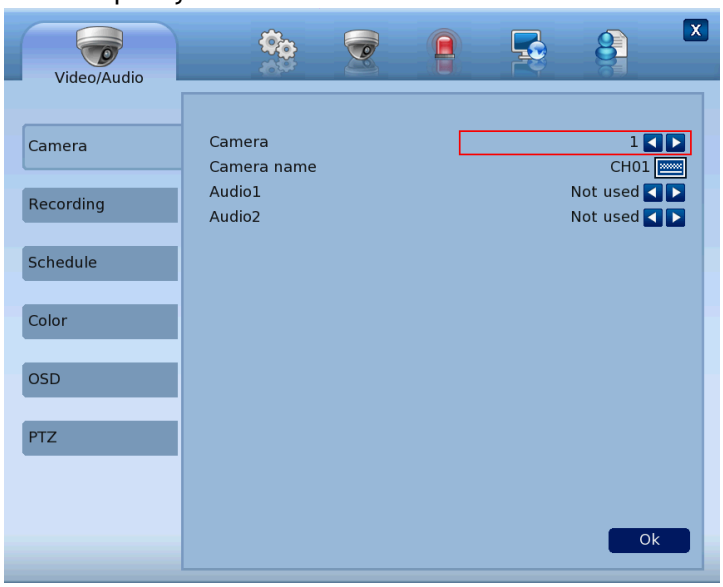
- If data is removed, it can't be recovered. Before use "initialize", important data must be backup.
- Remove all(Factory default) makes format HDD and you will loose recorded data.

2) Video/Audio

On the Video/Audio menu, camera, recording, schedule, color, OSD and PTZ can be configured.

① [Camera]

① You can specify channel name and audio for each camera.



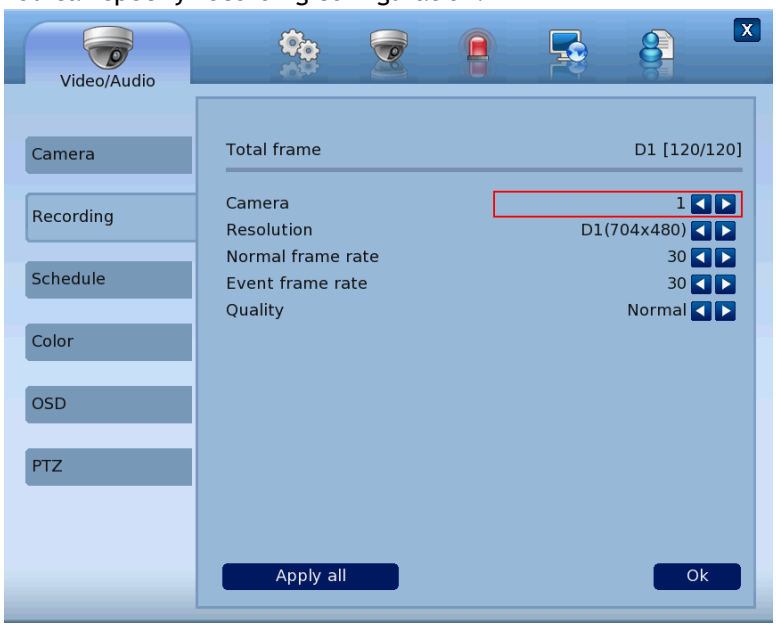
A. Camera : Select camera to change

B. Camera name : Input channel name (Max 8 digits)

C. Audio: Specify channel that audio is related.

② [Recording]

■ You can specify recording configuration.



A. Total frame: Max frame rate has restricted by screen resolution.

B. Camera: Select camera to set frame and quality.

C. Resolution: Specify screen resolution. (CIF / HALF D1 / D1)

D. Normal frame rate: You can specify recording frame rate when recording method is continuous for selected camera.

※ **Frame rate cannot exceed event frame rate.**

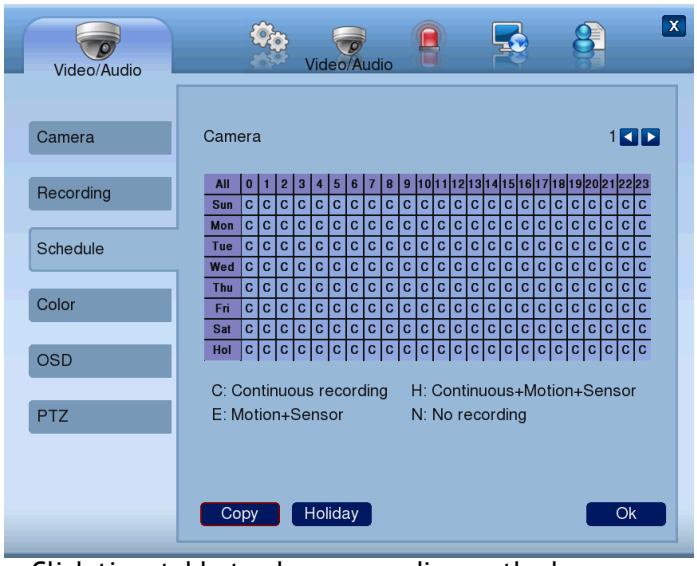
E. Event frame rate : You can specify recording frame rate when recording method is event for selected camera.

F. Quality: Specify image quality for selected camera.
(VERY HIGH, HIGH, NORMAL, LOW, VERY LOW, NETWORK)

G. Click "Apply All" button to apply setting to all cameras.

③ [Schedule]

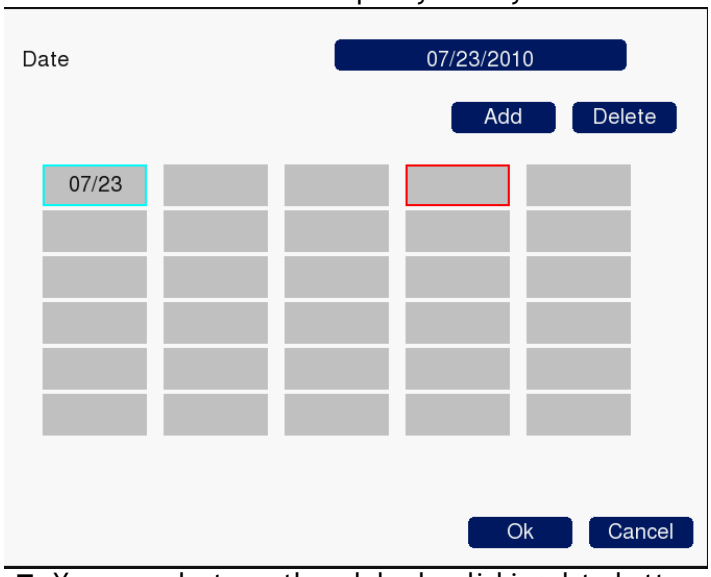
■ You can specify recording method by schedule with date and time.



A. Click time table to change recoding method.
B. Click channel number to change recording method for all time.
C. Click time label to change recording method for all channel.
D. Click 'APPLY ALL' button to change settings to all days. (From Sunday to Saturday)
E. Recording Mode

C: Continuous recording method
H: Continuous recording + event recording method (Motion, Sensor)
E: Event recording method: if event (Motion, Sensor) happens, recording works.
N: No Recording.

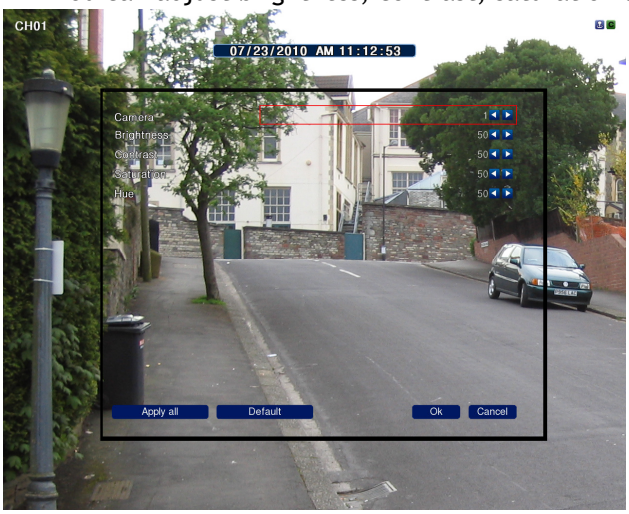
F. Click 'HOLIDAY' button to specify holidays.



■ You can select month and day by clicking date button.
■ Click the Add button, the selected month and day will be added to the list of holidays.
■ Click the Delete button to delete the selected date from list.

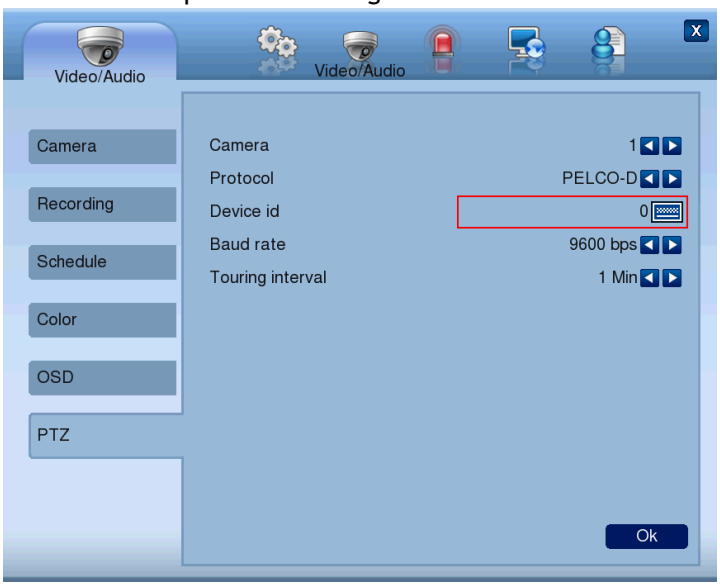
④ [Color]

■ You can adjust brightness, contrast, saturation and hue.



⑤ [PTZ]

■ This is to setup the PTZ configuration.



A. CAMERA: select camera to setup PTZ.

B. DEVICE NAME : Select camera name.(Max 15 cameras are supported)

1. DSC230 / Sony Co.,Ltd
2. HSDN251 / Honeywell Co.,Ltd
3. LPT - A100L / LG Co.,Ltd
4. LVC-C100 / C200HM / LG Electric Inc
5. MD200 / 2000 / 1200 / 800 / Sony Co.,Ltd
6. LG Multix / LG Co.,Ltd
7. LG Multix_E / LG Co.,Ltd
8. New Born / NEW BORN HIGHTECH
9. WVCS850 / Panasonic
10. PELCO-D / PELCO Co.,Ltd
11. PELCO-P / PELCO Co.,Ltd
12. SAMSUNG_E / SAMSUNG Co.,Ltd
13. SPD-2300 / 3000 / 3300 / SAMSUNG Co.,Ltd
14. SUNGJIN / SUNGJIN Co.,Ltd

15. TPD7720 / DYNACOLOR,INC
16. V1305R-DC / V1300RB / CRX – 1013 / VICON

C. DEVICE ID: Select ID that configured in camera.

D. BPS: Bit rate Per Second for data transmission.
Default value of BPS is '9600'

※ Value can be selected by camera setting: (1200/ 2400/ 4800/ 9600/ 19200/ 38400/ 57600/ 115200 bps)

E. DWELL TIME: This is time interval before moving to next preset position when touring.

- Select one from 5 seconds, 10 seconds, 20 seconds, 30 seconds, 1 minute, 3 minutes and 5 minutes.
- The default is 1 minute.

Notice

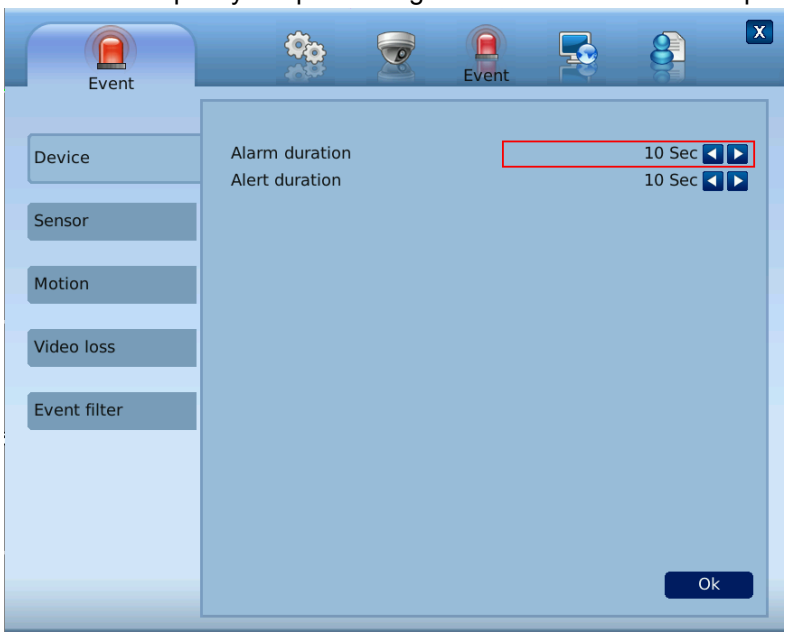
Basically DVR support one RS-485 port for PTZ connection.

3) Event

You can specify the processing when event occurs like sensor, motion detection, video loss, and the event filter settings when event occurs.

① [Device]

■ You can specify the processing when event occurs from input device.

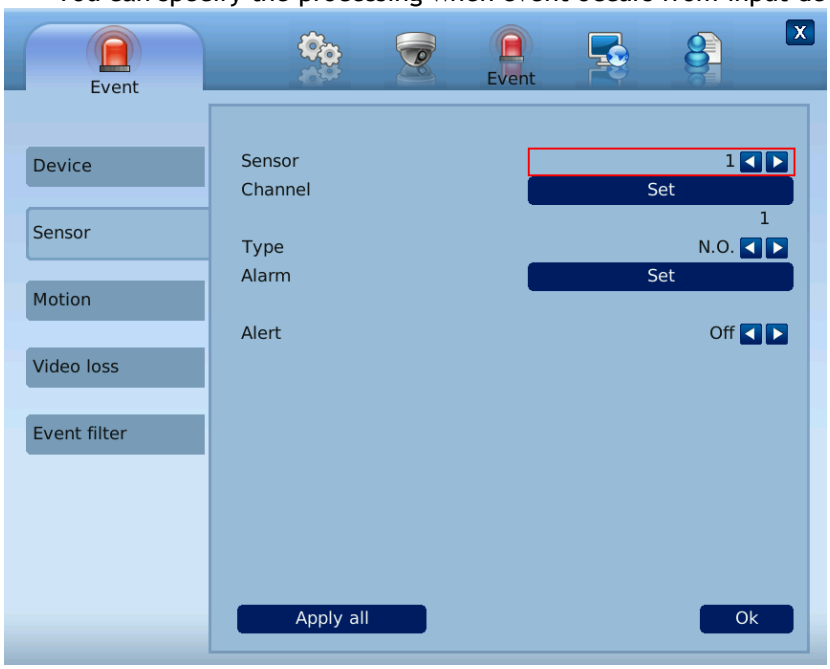


A. Alarm duration: Setup duration of Alarm(1 sec ~ 10 sec)

B. Alert duration: Setup duration of Alert(1 sec ~ 10 sec)

② [Sensor]

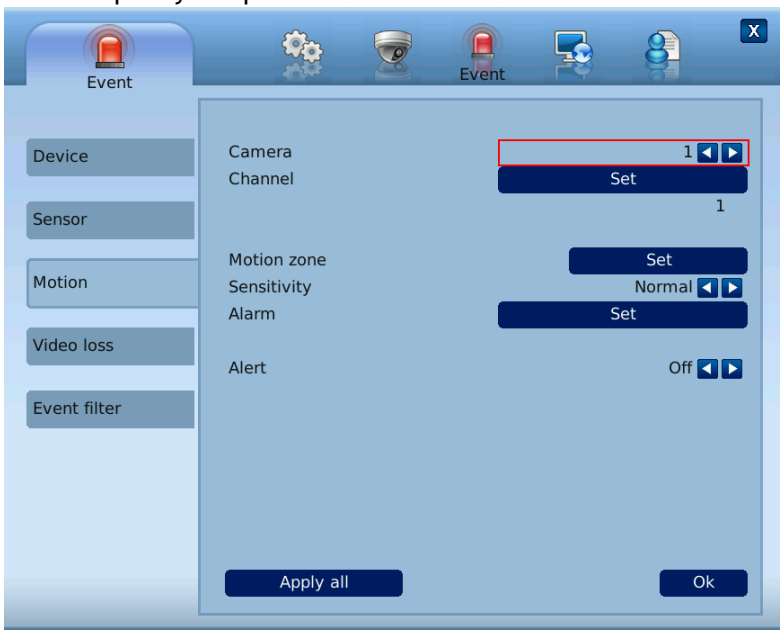
■ You can specify the processing when event occurs from input device.



A. Sensor: Selecting sensor number. (1 ~ 4)
B. Channel: Selecting associated channel with the sensor input.
C. Type: Setting NO / NC type.
   (Normal Open): The type of input device is opened normally.
   (Normal Close): The type of output device is closed normally.
D. Alarm : Setting alarm out when event occurs from input device.
E. Alert: Setting sound a buzzer when event occurs from input device. (ON/OFF)

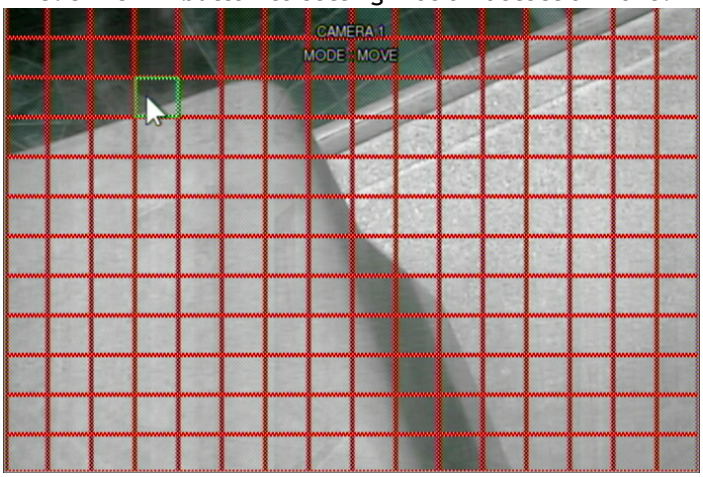
③ [Motion detection]

■ You can specify the process when motion is detected.

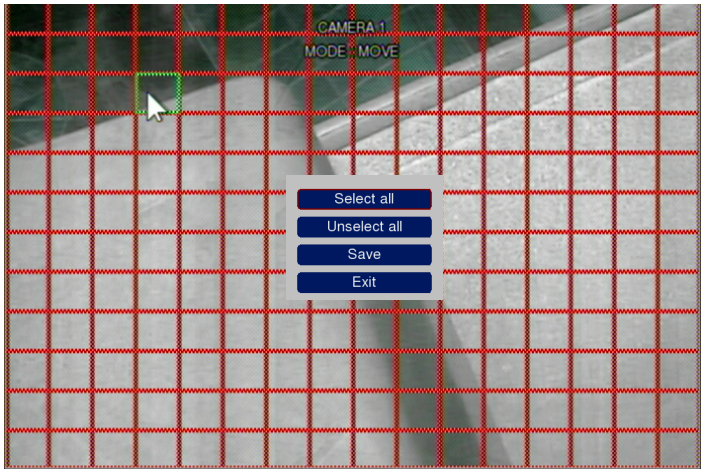


A. Camera: Select camera to setup event.
B. Channel: Selecting channel which is associated event.
C. Motion zone: Setting the motion detection zone.

- Click "SET" button to setting motion detection zone.



- Click right button of mouse on the screen to display menu window.

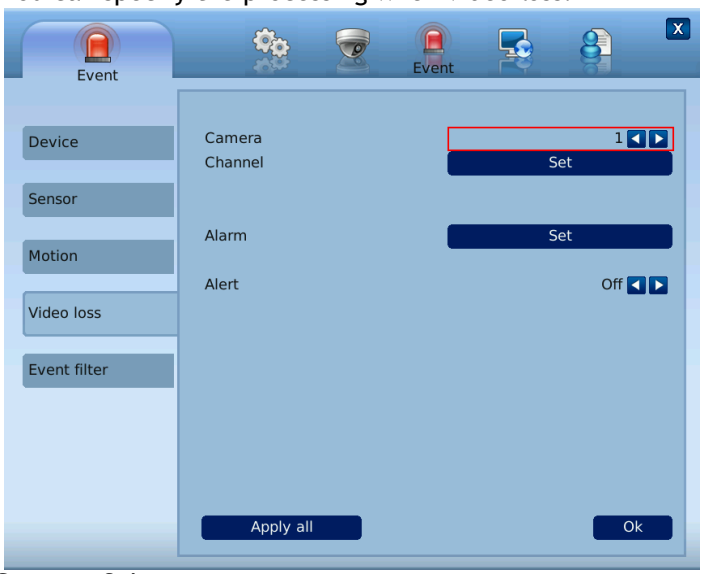


- Select all: Selecting entire area.
- Unselect all: Unselecting entire area.
- Save: Saving selected area as a motion detection zone.
- Exit: Exiting motion zone setting.

D. SENSITIVITY: Setting the motion sensitivity. (High/Normal/Low)
E. ALARM: Setting alarm out when motion is detected.
F. ALERT: Setting sound a buzzer when motion is detected.

④ [Video loss]

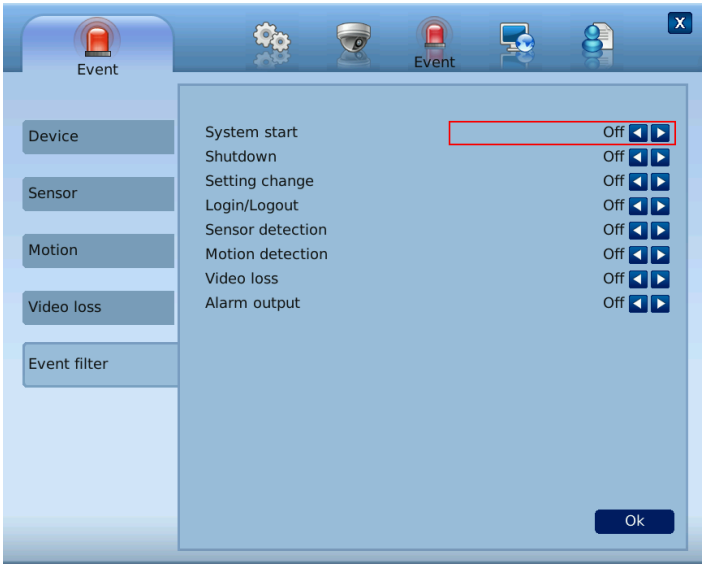
■ You can specify the processing when video loss.



A. Camera: Selecting camera to setup event.
B. Channel: Selecting channel which is associated event.
C. Alarm: Setting alarm out when video loss.
D. Alert: Setting sound a buzzer when video loss.

⑤ [Event filter]

■ Specifying the event which will be sent to the central monitoring center and E-mail.



A. System start: Enabling or disabling the system start event.

B. Shutdown: Enabling or disabling the system shutdown event.

C. Setting change: Enabling or disabling the setting change event.

D. Login / Logout: Enabling or disabling the login / logout event.

E. Sensor detection: Enabling or disabling the sensor detection event.

F. Motion detection: Enabling or disabling the motion detection event.

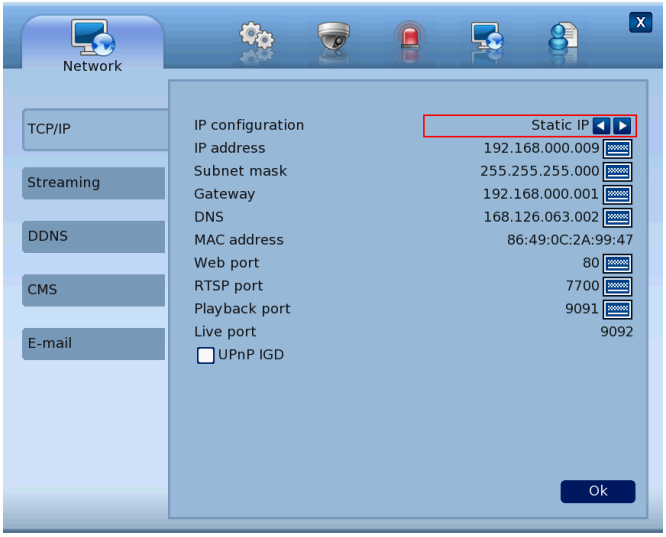
G. Video loss: Enabling or disabling the video loss event.

H. Alarm output: Enabling or disabling the alarm output event.

4) Network

You can set the network environments.

① [TCP/IP]



- You can specify the TCP/IP setting according to network environment.
- Specifying the TCP port number of Web, Playback and Live.
  Default values: Web(80), Playback(9091), Live(9092)

For dynamic IP

- All the items of IP address, subnet mask, gateway and DNS are disabled and set each value automatically.

For static IP

- IP ADDRESS: Enter IP address received from ISP using screen keyboard.
- SUBNET MASK: Enter subnet mask received from ISP using screen keyboard.
- GATEWAY: Enter gateway received from ISP using screen keyboard.
- DNS: Enter the DNS IP address received from ISP using screen keyboard.
- MAC ADDRESS: This is hardware specific unique address of network device, so user cannot set this value.
- UPnP IGD : You can access to DVR by UPnP without Port Forwarding, but your router should support UPnP.

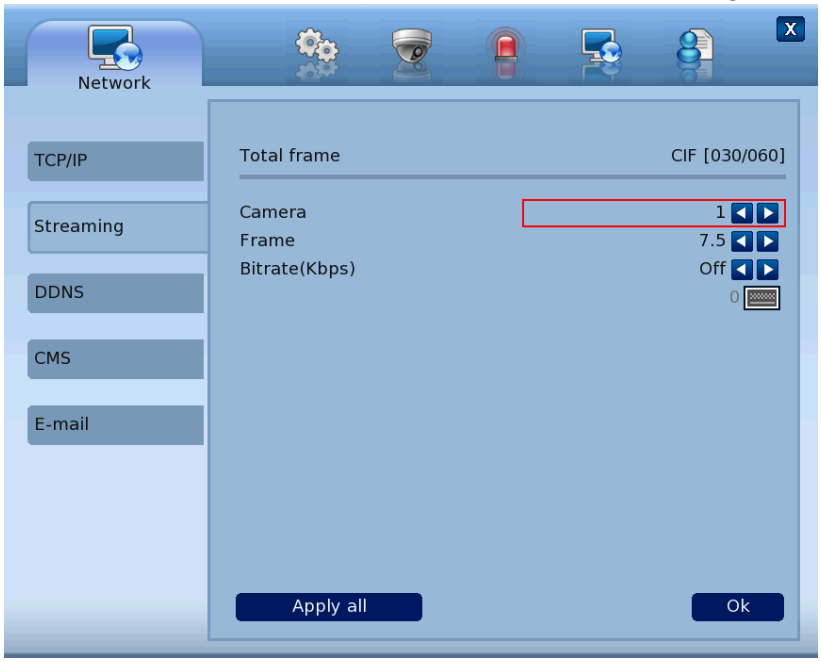
※ **8000~65535 port number is recommended.**

※ **Do not use the same port number with each other.**
Web (80), playback (9091), live (9092), CMS (9100)

※ **If the network of DVR is connected via router, you must set Configuration of port forwarding according to the router. (web, search, live ports) Please refer to user's guide of the router which you are using.**

② [Streaming]

■ You can set each item about the network video streaming.



A. Total frame: : Total frame rate set / Maximum available frame rate

B. Camera: Selecting camera.

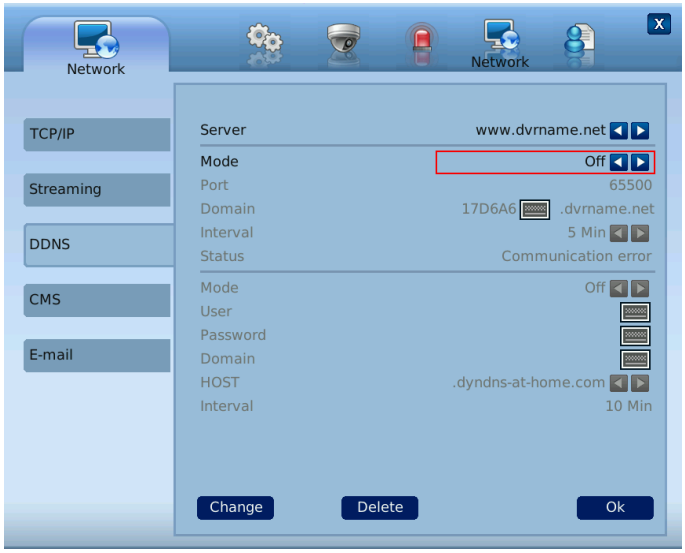
C. Frame: Frame rate per a second for each camera

D. Bitrate(Kbps): Enter Bitrate(Kbps) between 1~1024Kbps.

E. Click "Apply all" button to apply setting to all cameras.

③ [DDNS]

- You can use DDNS service : Recommend to use www.dvrname.net.
- You can connect to DVR easily using host name instead of IP address with DDNS (Refer to www.dyndns.org in case of using dyndns)



A. Mode: Enabling or disabling DDNS.

B. Server: IP address of DDNS.

C. Port: TCP port number of DDNS.

D. Domain: The domain name of DVR device.

E. Interval: Setting the interval of IP address updating.

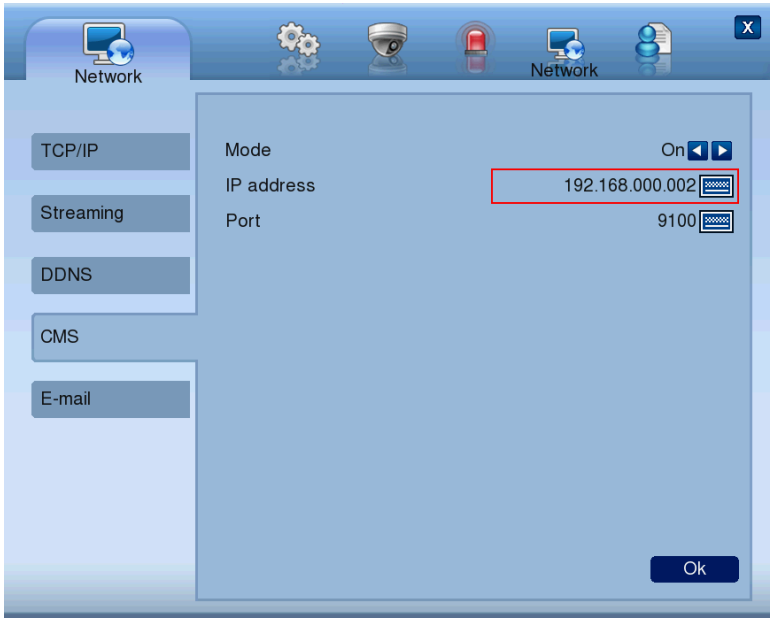
F. Status: Shows current status of 'www.dvrname.net' server.

***In case of DYNdns, you need to input User and Password**

If you want more information about DYNdns, you can visit dyndns website.

④ [CMS]

■ Specifying IP address and TCP port number of CMS.



A. MODE: Enabling or disabling event report to the central monitoring center when event occurs.

B. IP ADDRESS: The IP address of the central monitoring center.

C. PORT: The TCP port number of the central monitoring center.

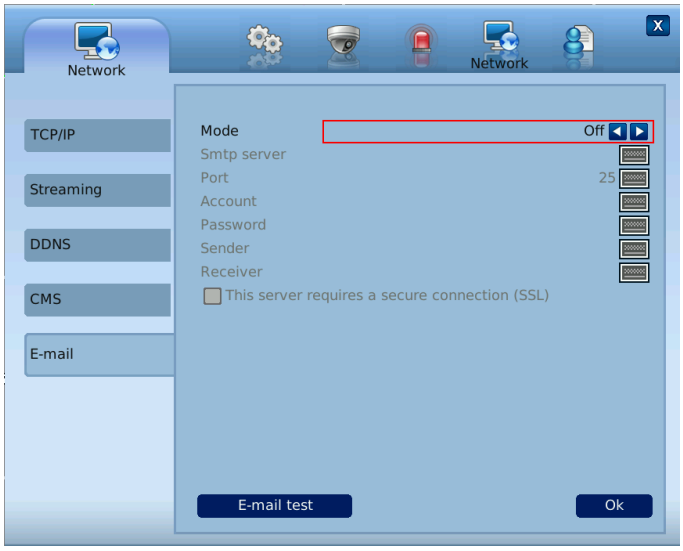
※ **8000~65535 port number is recommended.**

※ **Do not use the same port number with each other.**

Web (80), playback (9091), live (9092), CMS (9100)

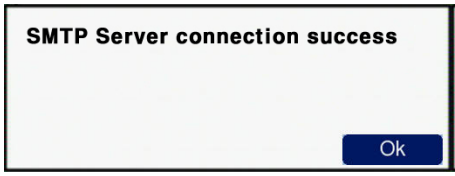
⑤ [E-mail]

■ You can set the E-mail notification when event occurs.



A. Mode: Enabling or disabling E-mail notification.
   (OFF / Authentication / Not authentication)
B. Smtp server: Setting the IP address or domain name of SMTP server.
C. Port: Setting the TCP port number of SMTP (Default value is 25).
D. Account: Setting the E-mail account registered in SMPT server.
E. Password: Setting the password of the E-mail account.
F. Sender: Setting the E-mail address of sender.
G. Receiver: Setting the E-mail address of receiver.
H. E-mail test: Click to send testing E-mail, then RECEIVER can check the testing E-mail.

< Success >



< Failure >

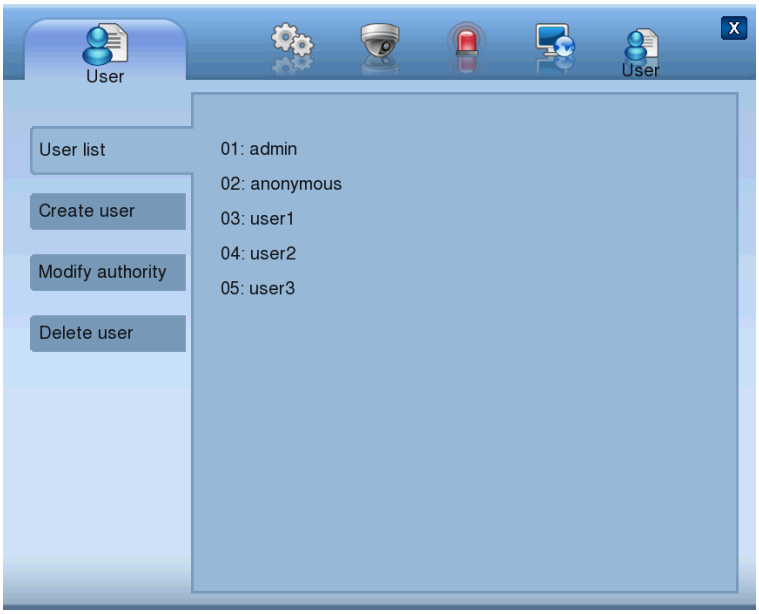
※ SMTP server does not support encrypted E-mail protocol.

5) User

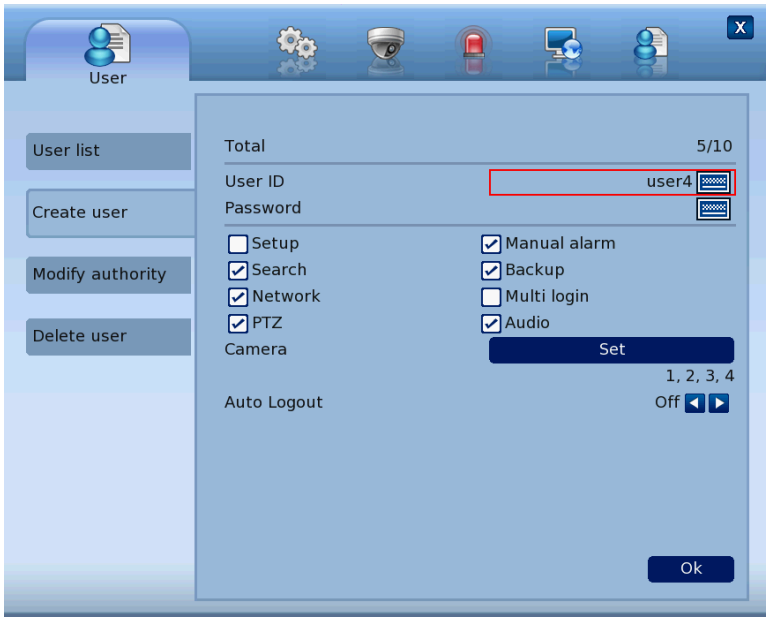
You can create new user, modify authority, delete user.

① [User list]

■ You can view the list of all users.



② [Create user]



A. Total: It displays the number of registered users and the maximum number of users can be registered.

B. User ID: Input user id to create.

C. Password: Input password for the user id.

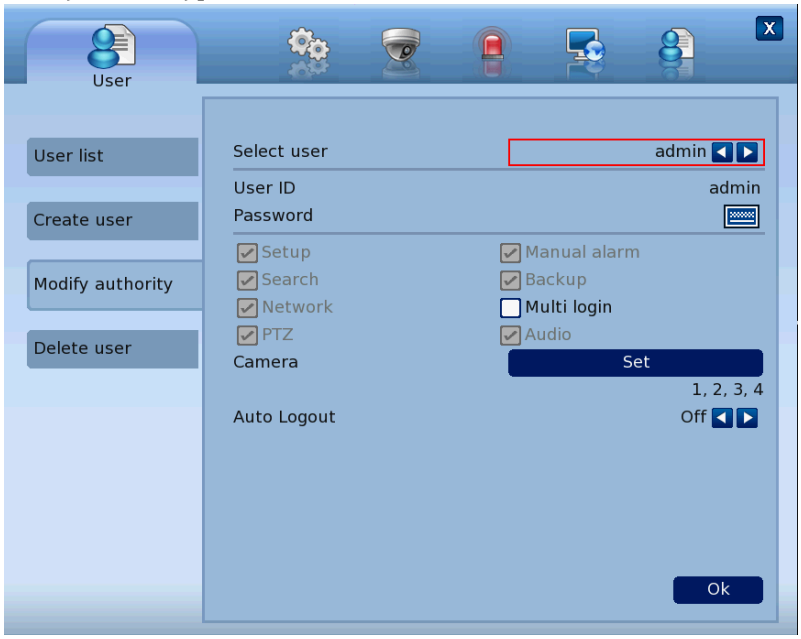
D. Authority items: Specify each authority item for the user id.

1) Setup
2) Manual alarm
3) Search
4) Backup
5) Network
6) Multi login
7) PTZ
8) Audio

E. Cameras: Specify the cameras which the user can see.

F. Auto Logout: Turn on/off Auto logout from local and network(Off / 5 Min / 10 Min / 30 Min / 60 Min)

③ [Modify authority]



A. SELECT USER: Select a user to modify authority.

B. User ID: Display selected user ID.

C. Password: Change password using keypad button.

D. Authority items: Specify each authority item for the user id.

1) Setup
2) Manual alarm
3) Search
4) Backup
5) Network
6) Multi login
7) PTZ

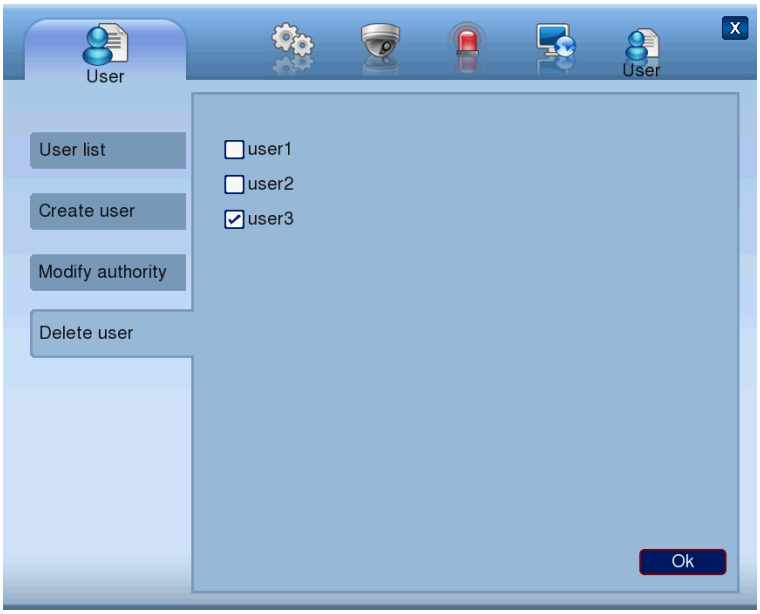
8) Audio

E. Cameras: Specify the cameras which the user can see.

F. Auto Logout: Turn on/off Auto logout from local and network(Off / 5 Min / 10 Min / 30 Min / 60 Min)

④ [Delete user]

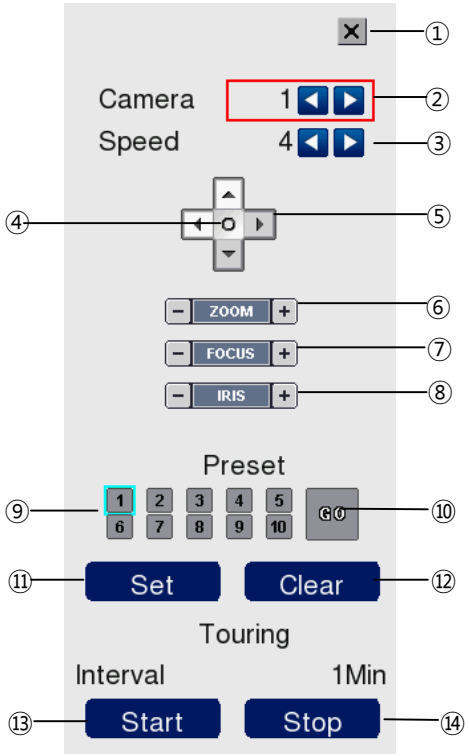
① Select user id to delete.



2-4. PTZ control

■ It is used to control PTZ camera which is connected at RS-485 port. Settings of camera and DVR should be done if you are to control PTZ camera.

1. Click the icon to control PTZ.
2. Control the PTZ camera using each item below.



① Click this button to close the PTZ control window.

② Click this spin control to select PTZ camera. (1~4)

③ Click this spin control to specify the moving speed of PTZ camera (1~6).

④ Click this button to show the OSD menu of camera.

※ **Support camera: LG-Multix, LG-Multix_E, Pelco-D, Pelco-P**

⑤ Click these direction buttons to pan or tilt camera.

⑥ Click to control zoom in or out.

⑦ Click to control the focus of camera manually.

⑧ Click to control the iris of camera manually.

⑨ Click to select preset number.

⑩ Click to move to selected preset position.

⑪ Click to set current position as a new preset position.

⑫ Click to delete specified preset number.

⑬ Click to start touring, which function traverse each preset position one by one according to dwell time.

⑭ Click to stop touring.

- Setting a new preset position
    1. Move camera position using direction button ⑤.
    2. Select the preset number to set using button ⑨.
    3. Click button ⑪ "SET".
    4. Repeat process 1 ~ 3 stage to set another preset position.

  ※ **Preset numbers are available up to 10.**

  ※ **The maximum preset number is different according to the specification of camera.**
- Moving camera to preset position
    1. Select the preset number to move using button ⑨.
    2. Click button ⑩ "GO".

  ※ **Moving camera to preset position is only available when the camera supports preset feature.**
- Deleting preset position
    1. Select the preset number to delete using preset number button ⑨.
    2. Click button ⑫ "CLEAR".

  ※ **Deleting preset position is only available when the camera supports.**
- Starting touring
    1. Click button ⑬ "START".
    2. Then it will start traversing each preset position one by one automatically.
- Stopping touring
    1. Click button ⑭ "STOP".
    2. Then it will stop traversing.

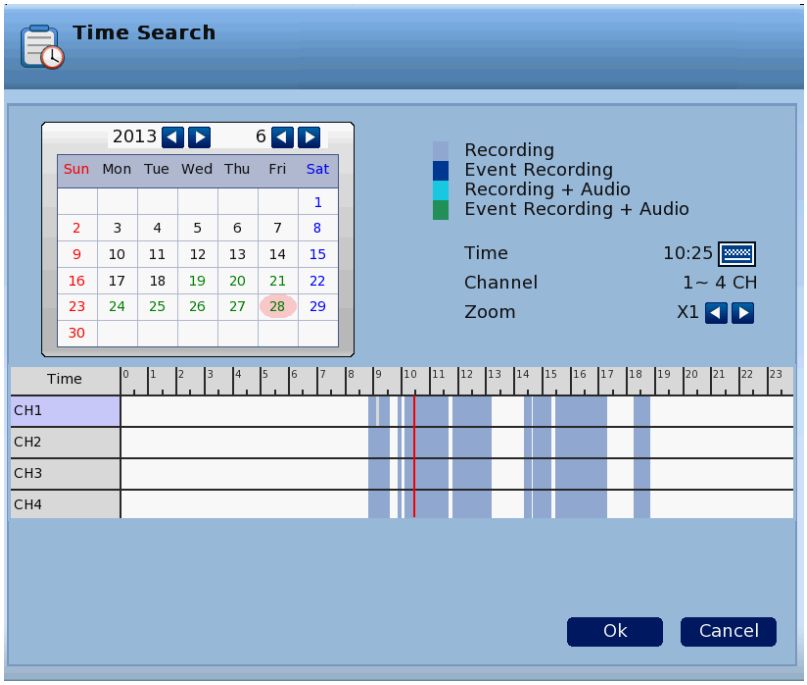
> **Notice**
>
> The tour which is working will be stop after the setting is changed.

2-5. Search (playback) & backup

Various features are available for user to search recorded data easily.

1) Time search

- You can search recorded data with date and time.



- How to search recorded data

A. Click button on main menu bar.

B. Select the date you want to search on the calendar above.
(The date with recorded data is displayed in bold.)

C. Then recorded time table will be displayed.

D. Select time you want to search whenever you chick the recorded time table the preview window is shown.

E. Then click "OK" button to playback.

F. Click "Cancel" button to return to live view screen.

i. **If there's multiple recorded data at the same time stamp, you can select one of them at popup window.**

ii. **Bigger number of duplicated data stands for more recent data.**

2) Event Search

- You can search recorded data using event occurrence time.

A. Click the button on the main menu bar which is located in the lower position of search mode screen.

B. Use buttons on the upper right side to select camera to search.

C. Check sensor, motion check box below to filter out the events.

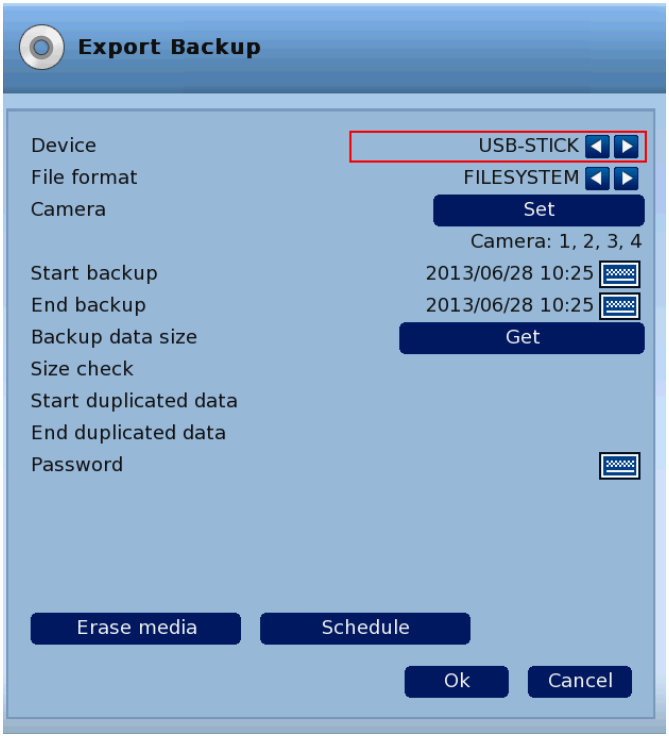
D. Move to previous or next page using - and + buttons.

E. Select a data to search from the list. Click the mouse button to move to the corresponding recorded data.

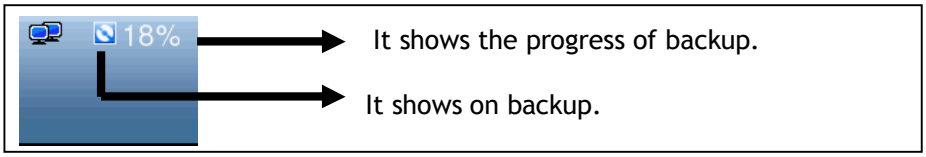
F. Click "Play" button and the searched data will be played.

3) Backup

- You can back up the recorded data which you select date/time and channels.



A. Click mouse on the icon of the menu bar which is located in the lower position of the screen.
B. Select a device to backup data will be stored.
C. Select media type. If you select FILESYSTEM, backup data will be stored as native format with backup player. If you select AVI, only one channel is backup
D. If you select the camera you want to perform a backup, click "SET" button and select cameras you want. On the other hand, when AVI is selected, only one camera can be selected.
E. It displays selected cameras. (CAMERA : 1,2,3,4)
F. Specify starting date/time of backup period.
G. Specify ending date/time of backup period.
H. Check the data size to backup. But, when AVI is selected, only one camera can be selected.
I. If duplicated data exists in the backup data period, select one data from "START DUPLICATED DATA" or "END DUPLICATED DATA".
J. After finishing setting for backup, click OK button
K. When backup is started, the screen moves from search to real time live mode and the icon and text will be shown as below to display backup progress.



L. The message "BACKUP STOP" will be shown when backup is finished.

How to cancel backup

➔ If you press button when backup is running, the selection message will be shown as below.

➔ Click "OK" button to cancel backup.

Erase Media

➔ You can erase data in the storage media, like USB memory stick.

➔ When you are to use USB memory stick, after connecting USB storage to USB port of front side, click "MEDIA ERASE" button to erase data.

➔ It is recommended to backup important data stored in USB storage before using this function.

※ The backup process is not started if you specify invalid starting and ending date/time.

※ The backup period cannot exceed 24 hours.

※ The USB memory stick should be formatted as FAT32.

※ When AVI backup, if there are different resolution or frame rate exist, the AVI files are separated at each changed position.

※ Maximum size of backup data is depends on the storage media to be used. In case of USB memory stick, only free space is used. (But, in case of AVI backup, the maximum file size is limited to 2GB).

※ If there's duplicated data at the same time stamp, you can select specific data position with the dialog box as below. Select data position with spin box, and then click "OK" button to start back up. The older data is the smaller number.

※ The other functions do not work when backup is running.

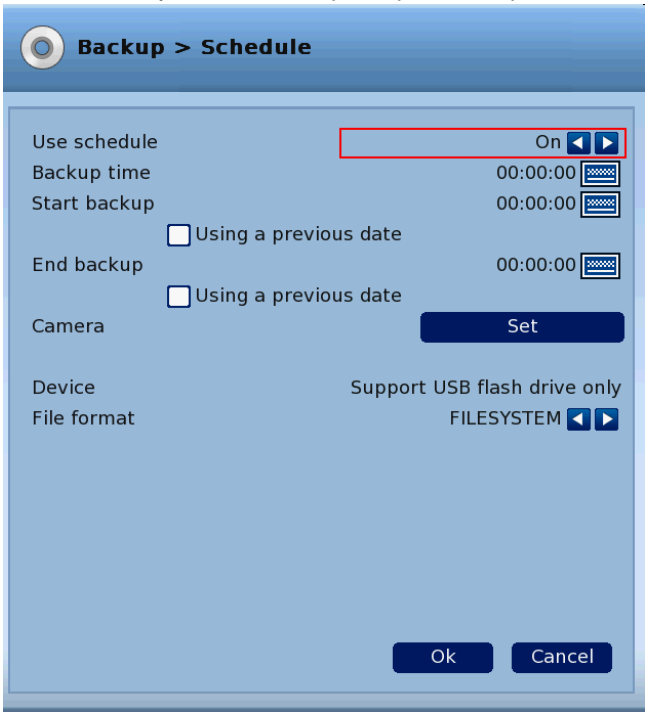
※ Bigger number of duplicated data stands for more recent data.

※ To playback backup data, please install 'BackupPlayer.exe' file from the enclosed CD to your PC.

Notice

Do not remove USE memory stick when backup is running.

■ You can backup automatically daily based by schedule backup.



A. If you are to use schedule backup, set "Use schedule" to "ON".

B. Enter the time to execute backup at "Backup time". If USB memory stick is not connected or has no free space, backup cannot be executed.

C. Enter start time of backup period at "Start backup". Check "Using a previous date" if needed.

D. Enter end time of backup period at "End backup". Check "Using a previous date" if needed.

E. If you want to select cameras to backup, Click "SET" button at "CAMERA" and then select cameras. On the other hand, In case of AVI backup, only one camera can be used.

F. Selected cameras are shown. (Camera : 1,2,3,4)

G. Select data format. When selecting "FILESYSTEM", native backup player is included as well. So you can search and playback easily with it.

H. Click "OK" button after finishing settings. When the set time at "Backup time", the backup will be executed automatically.

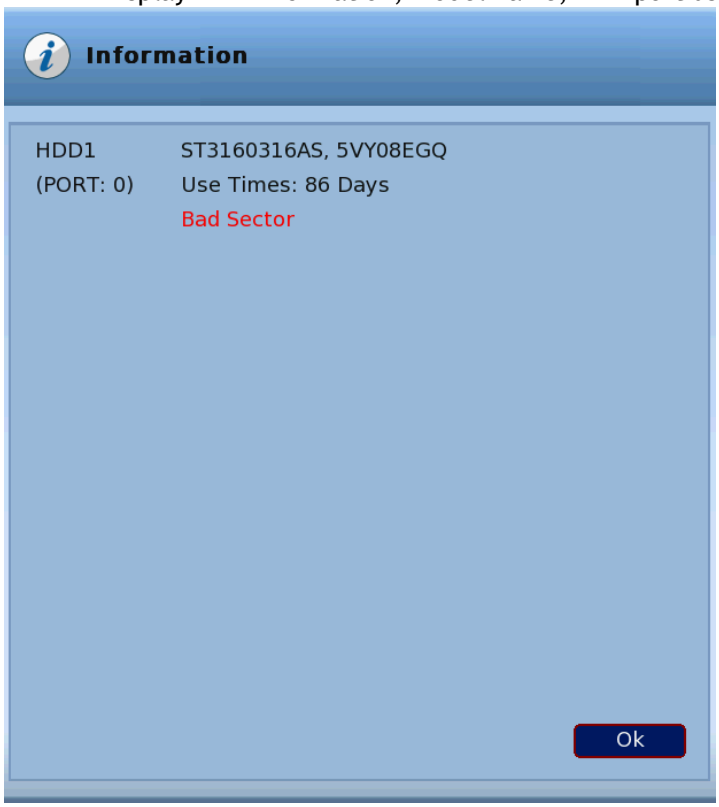
※ **Schedule backup will be executed repeatedly once a day.**

2-6. HDD defect test

■ In case HDD is defected, following message displayed to report to the user.

A. Test period.
- When DVR start up after installing new HDD(Each HDD test takes around 2min 30seconds).
- When DVR reboot abnormally 5times(Each HDD test takes around 2min 30seconds).
- Every 6hours after start up DVR(Each HDD test takes 1~2seconds).

B. Test result display
- If there is bad sector on HDD during HDD test, is displays following error message.
- Display HDD information, model name, HDD port used, use times.



Caution

It may not necessary to replace HDD immediately after showing HDD defect message. However, it is necessary to replace HDD sooner because HDD test shows bad sector, may not usable in near future.

CHAPTER 3
Web viewer

3-1 Installation ---------- **53**

1. Web viewer installation 53

3-2 Functional description ---------- **55**

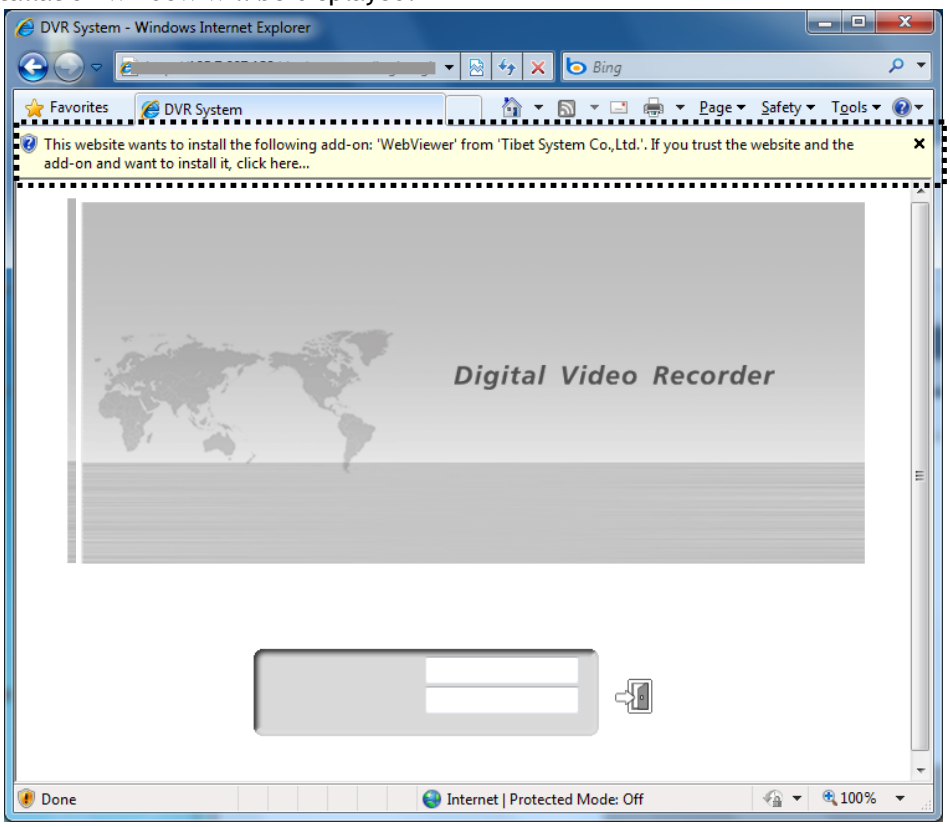
1. Web viewer monitoring window 55
2. Web viewer search window 56
3. Search menu 57
4. Saving as AVI file dialog box 58

3-1. Installation

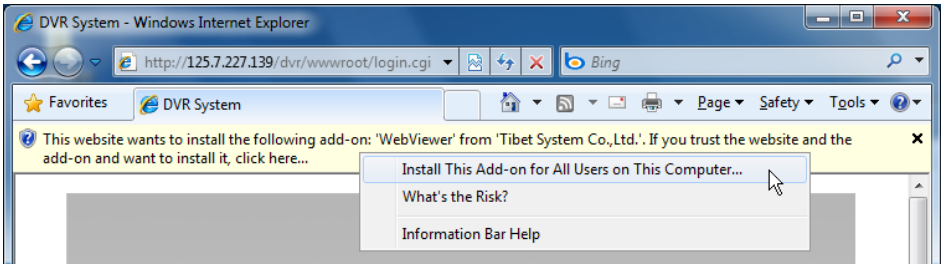
■ Set up the network before the installation.

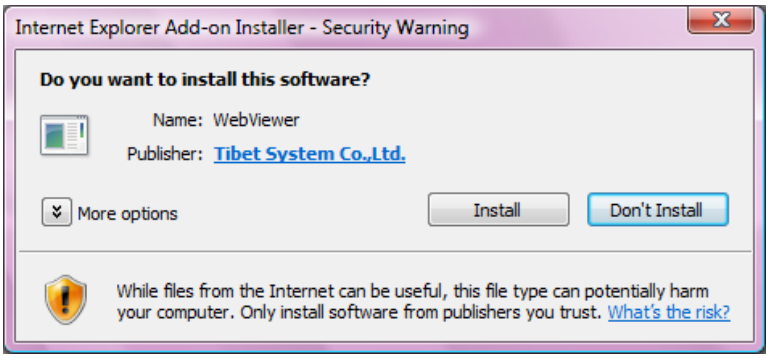
1. Web viewer installation

① Enter the DVR IP address in the Web address window, and then the following Active X installation window will be displayed.

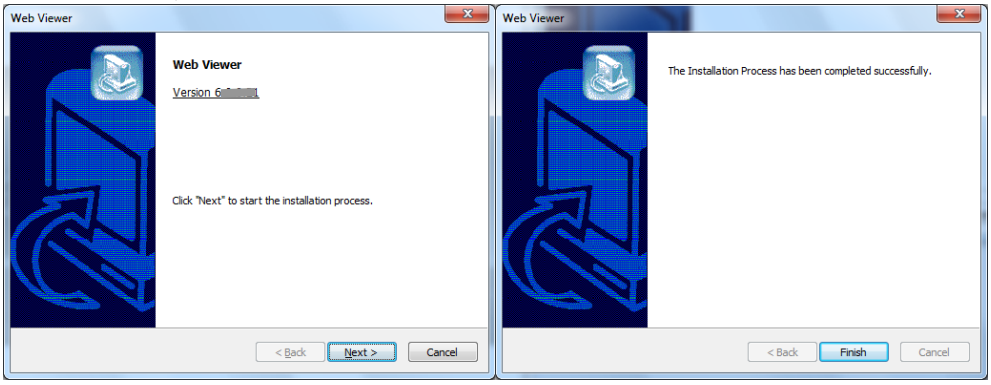

DVR System - Windows Internet Explorer
Favorites
DVR System
This website wants to install the following add-on: 'WebViewer' from 'Tibet System Co.,Ltd.'. If you trust the website and the add-on and want to install it, click here...
Digital Video Recorder
Done
Internet | Protected Mode: Off
100%

② When you click on the Active X install button, the following window will be displayed. Press the Install button.

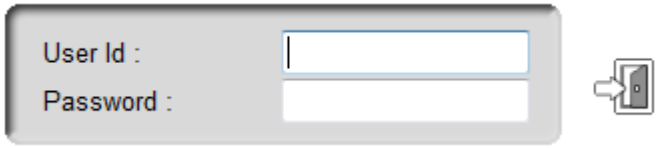

DVR System - Windows Internet Explorer
http://125.7.227.139/dvr/wwwroot/login.cgi
Favorites
DVR System
This website wants to install the following add-on: 'WebViewer' from 'Tibet System Co.,Ltd.'. If you trust the website and the add-on and want to install it, click here...
Install This Add-on for All Users on This Computer...
What's the Risk?
Information Bar Help


Internet Explorer Add-on Installer - Security Warning
Do you want to install this software?
Name: WebViewer
Publisher: Tibet System Co.,Ltd.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

③ Press the Next button from the Web View installation window. When the installation is completed, the Web initialization screen will be displayed. (General installation recommended)



④ Enter the ID and password. (Multi-login is not enabled and you must log in to the DVR with an unused ID.
(Default: admin, user1, user2, user3)



Caution
Web Viewer and CMS cannot be used at the same time.

3-2. Functional description

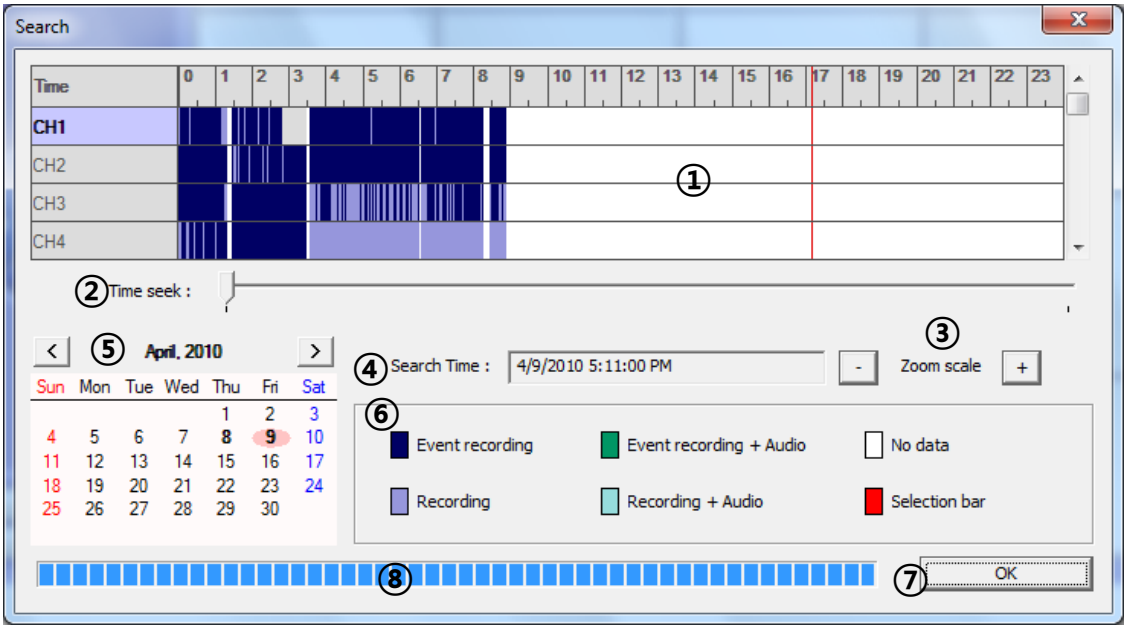
1. Web viewer monitoring window

① Divide screen division (Full screen/1/4)
② Selecting a camera
③ Real time image capture (Save as JPEG)
④ Settings (It is available only when you logged in as admin)
⑤ Enable or disable incoming audio (Default value is disable.)
⑥ Zoom control
⑦ Iris control
⑧ Focus control
⑨ Preset (Click "Go" button after selecting preset number at combo box)
⑩ Start/Stop touring (Rotation between each preset positions)
※ Preset and touring are available after preset is set on the device.
⑪ Pan tilt control (Up, down, left and right buttons)
⑫ Controlling moving speed when pan tilt operation
⑬ Switching to search window
⑭ Logout

2. Web viewer search window

① Divide screen division (Full screen/1/4)
② Selecting a camera
③ Saving video or still image (Saving as AVI/JPEG/BMP)
④ Date/Time selection button to play back (Refer to 3. Search dialog box)
⑤ Enable or disable incoming audio (Default value is disabled.)
⑥ Pause button
⑦ Forward play button
⑧ Backward play button (Displaying only key-frame)
⑨ Fast forward play button
⑩ Fast backward play button
⑪ Switching to monitor window
⑫ Logout

3. Search Menu



① Recorded data graph (Click on the data graph to select time to play.)

② Time scroll bar

③ Zoon in/out of graph (It can be scaled from 2 hours to 24 hours by minute unit.)

④ Displaying selected data/time

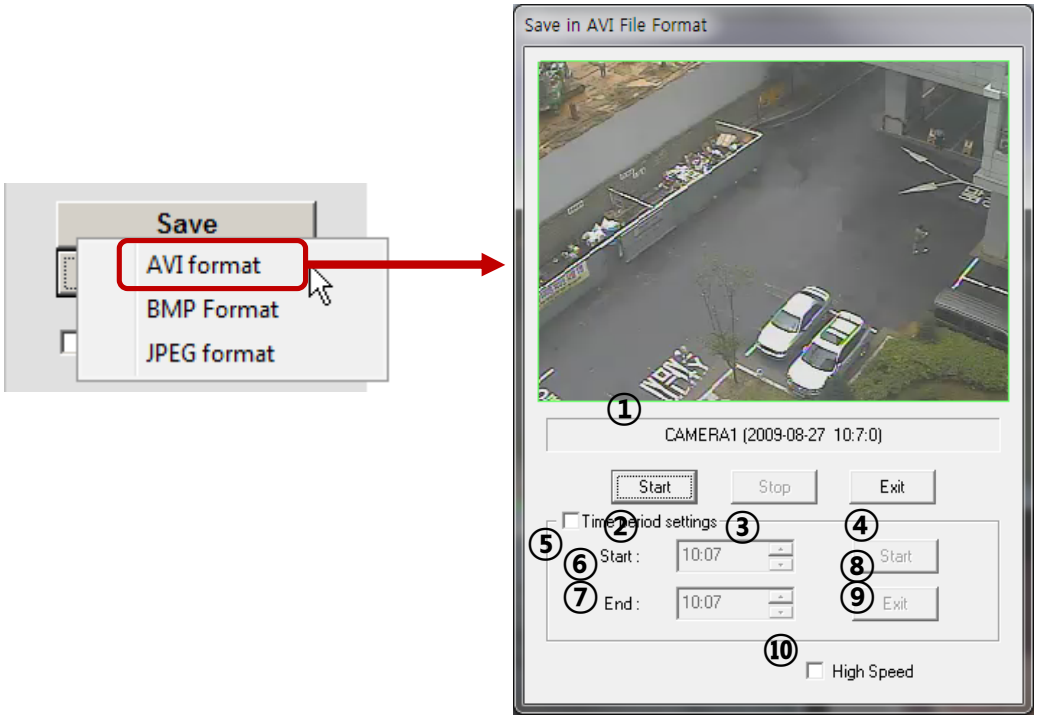
⑤ Displaying calendar (The dates are shown in bold if recorded data exist.)

⑥ Description of the color of the recorded data graph

⑦ "OK" button (Video is played immediately when you selected data/time which has recorded data.)

⑧ Progress bar which shows loading progress.

4. Saving as AVI file



① Camera name/Date/Time which is currently displayed.

② Starting AVI saving (File name is requested when you click on this button.)

③ Stopping AVI saving

④ Closing Save as AVI dialog box (It will be closed automatically after stopping AVI file if it is being saved.)

⑤ Specifying time period to save AVI file.

⑥ Starting time to save AVI file.

⑦ Stopping time to save AVI file.

⑧ Starting periodic AVI file saving

⑨ Closing after finishing AVI file saving.

⑩ Increasing AVI saving speed with reducing displaying frame rate.

CHAPTER 4
SMART PHONE APPLICATION
i-Smart Viewer

4-1 Functional description ----------60

4-1. Functional description

4-1 Software Installation

How to install i-Smart Viewer APP through iTunes and Android market.

1) On the PC web browser,

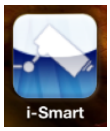
Visit http://itunes.apple.com/app/i-smart-viewer/id399765847?mt=8

Visit https://market.android.com/details?id=com.livezen.iSmartView&feature=search_result

2) You will see below web page and click « View in iTunes »

3) Click "Free APP" to download App to your iTunes.

4) Sync iTunes and your iPhone / iPod to install Application to your iPhone / iPod.

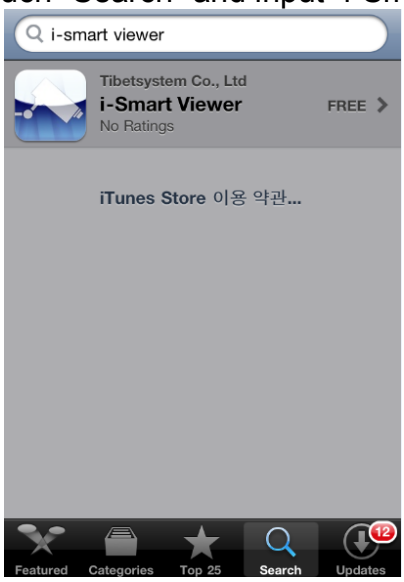


5) You will see i-Smart icon in the iPhone / iPod.

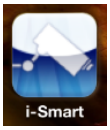
How to install i-Smart Viewer APP on the iPhone / iPod APP Store

1) On the iPhone / iPod, run APP Store Application.

2) Touch "Search" and input "i-Smart Viewer" and select application as below.



3) After installation, you will see i-Smart icon on the iPhone / iPod.



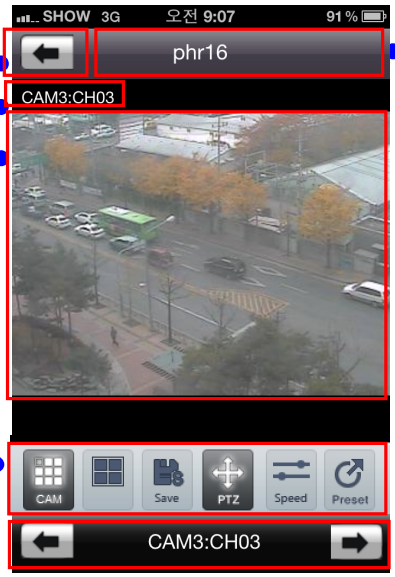
4) Click i-Smart icon to run program

4. Live View / Toolbar

Move Back to DVR List

Shows Camera name

Display Live Screen
- Drag screen to move channel.
  (Drag to left: move to next channel)
  (Drag to right: move to previous channel)

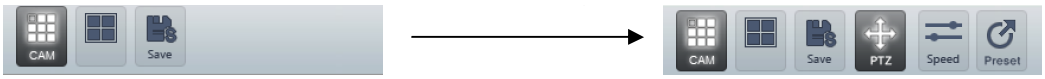


Shows registered DVR name

Control Bar
- If PTZ camera is connected, PTZ icon and control icon will be enabled. (Whenever you touch control icon, it shows "Zoom > Iris > Focus > Speed)

Select camera by arrow and touch camera name.

If PTZ camera is connected advanced PTZ camera menu will be shown as below



[Basic menu] **[Advanced PTZ control menu]**

Channel selection mode can be enabled from PTZ control mode

Select Screen Division

Snapshot: Save still image (Saved image can be load on the "Album" tab

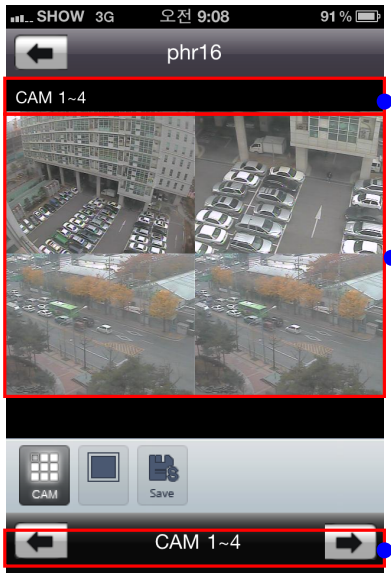
PTZ mode On/Off: Enables to control Pan, Tilt, Zoom, Iris, Preset and Tour.

Select Zoom, Iris, Focus, Speed control

Select Preset, tour control

5. Screen Division mode (1 / 4)

Touch **icon to select screen division (Switch screen division mode to 4 CH mode)**

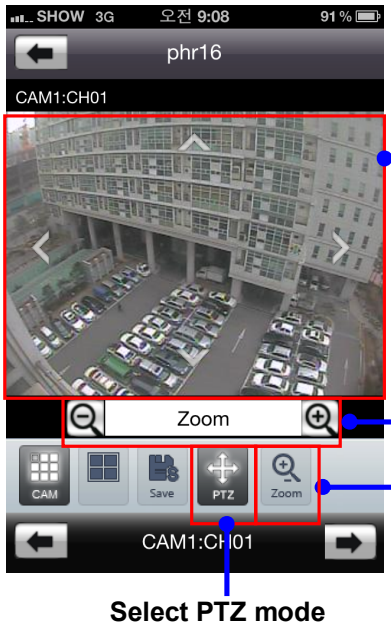


Camera Information

4 Channel mode
- Drag screen to Left / Right : move to next / previous 4 cameras
- Touch channel to enlarge selected channel as 1 camera mode.

Camera Information
- Change channel by drag or touch arrow.
- Touch channel name to move selected channel.

6. Pan, Tilt, Zoom, Iris, Focus, Speed Control



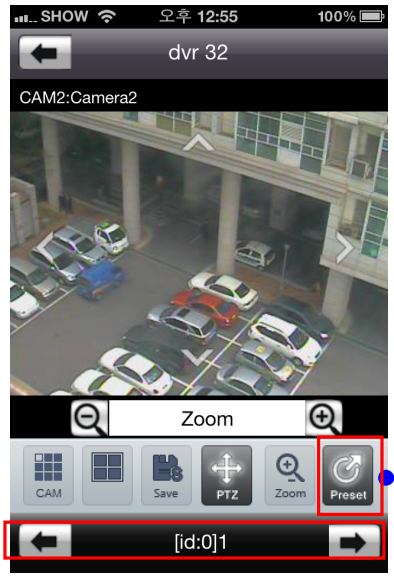
Pan / Tilt Control
- Touch arrow on the screen to control : Up / Down / Left / Right

Zoom / Iris / Focus Out and In

Zoom / Iris / Focus / Speed mode
Whenever touch this icon, switch mode to Zoom / Iris / Focus / Speed

Select PTZ mode

7. Preset / Tour Control

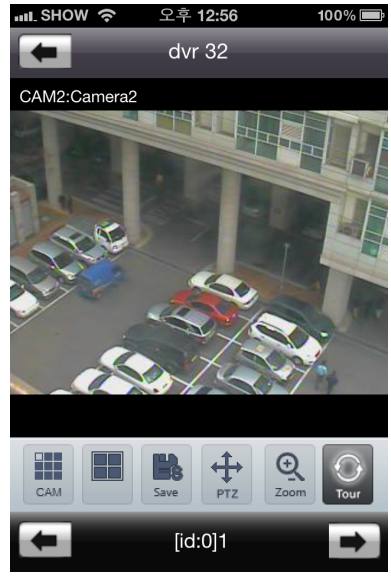


Select Preset / Tour mode
When preset or tour is set on the DVR, this icon will be activated.

Camera Information
- Change channel by drag or touch arrow button.
- Touch channel name to move selected channel.

8. Full Screen mode

Change rotation of device, it will change it as full screen mode

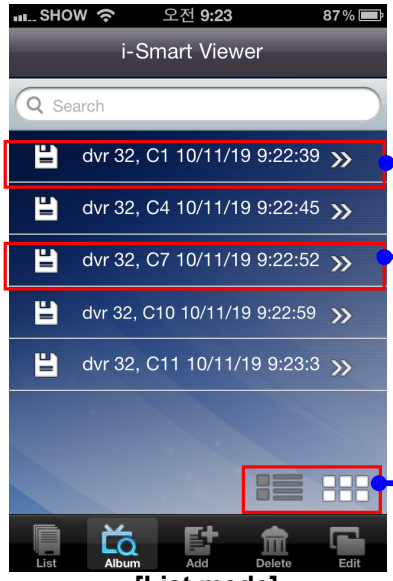


1 / 4 Channel Screen division

Snapshot: Save still image

9. Album Tab

Album Tab is to see saved still image by snapshot function.

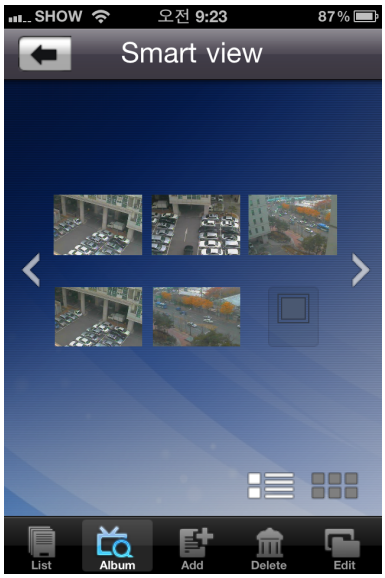


[List mode]

Search Image by file name

Saved file list
(Shows DVR name, camera number,
YY/MM/DD Hour:Min:Sec)

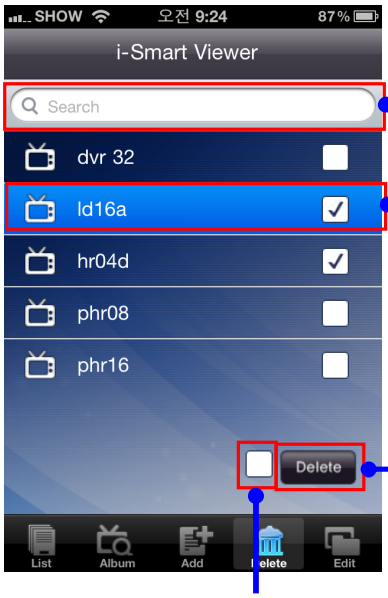
Switch to List mode / Thumb Nail mode



[Thumb Nail mode]

10. Delete Tab

Delete tab is to delete DVR from the registered list.

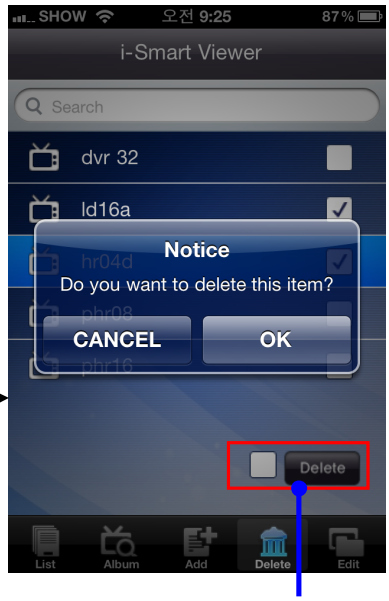


Search DVR from list

Search DVR To delete

Delete selected DVR

Search all DVR



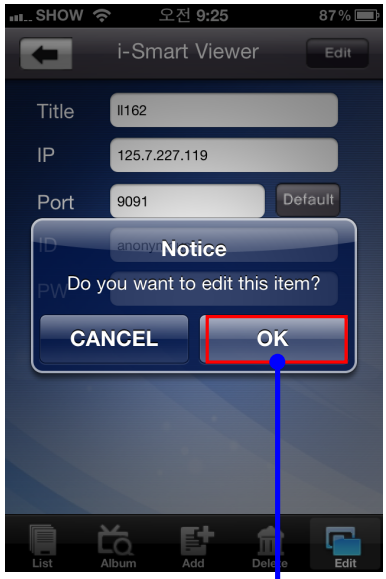
Touch OK to delete DVR

11. Edit Tab

Edit Tab is to edit DVR access information.

Search DVR From list

Select DVR to edit



Touch OK to save Modified information

CHAPTER 5
Appendix

5-1 Check before requesting for service ----------68

5-2 Recommended device to use ----------71

5-3 Initial setting list for factory default ----------73

5-4 Product specification----------79

5-1. Check before requesting for service

Check before requesting for service.

If the following symptoms are observed when using the product, recheck the following. It may not be a problem.

Symptom	Checkpoint and resolution
I cannot turn on the power of the device	Check whether the power plug is correctly plugged.
	Check whether the voltage of the power supply is correct.
	If the power cannot be turned even when the power of the device is connected correctly, please contact your closest service center
The power of the device is turned on, but the screen on the monitor is not turned on	Check whether the power plug is correctly plugged.
	Check whether the monitor is turned on.
	Check whether the video cable between the monitor and device is connected correctly.
	Check the selected monitor type.
	Try disconnecting the power plug, and then plugging it again.
Camera number is displayed on the screen but the video of the camera is not displayed	Check whether the video output port of the camera is correctly connected to the device.
	Check whether the power supply of the camera is connected correctly.
	Check whether the resolution is set to 1024x768 in VGA environment setting.
	Check if there is any issue with the video cable between the device and the camera.
	Reboot this device.
Video of camera is displayed on the screen but I cannot record the video through the device	Check the recording setting from the recording setting menu.
	Check whether the hard disk is recognized from the system information window.
	If the hard disk is not recognized normally, check the format and connected condition of the hard disk.
	Check the available space on the hard disk.
I cannot search the recorded video.	During the search, check whether the video data currently being recorded exists.
	If the video data currently being recorded does not exist, check the recording setting of the menu.
	Check whether the hard disk is recognized from the system information window.
	If the hard disk is not recognized normally, check the format and connected condition of the hard disk.

Symptom	Checkpoint and resolution
I cannot hear the audio recorded with the video.	Check whether the recording audio channel is correctly set up.
	Check whether the connecter on the rear side of the device is connected with external device (Line input) correctly.
	Check whether the connected external device is operating correctly.
Screen colors of some cameras are incorrect or the video is displayed in abnormal way.	If there is an object in the camera connected to the system, connect the camera to the video input port to check the video and check if there is any issue with the existing cameras connected to the system.
	Check whether the video format of the device is the same as that of the camera.
	The video format can differ by the region into PAL or NTSC format. IF the video format of the device is not the same as that of the camera, the video may not be recognized.
There is noise in the video.	If there is an issue with the camera connected to the system, connect a different camera to the video input port to check whether the existing camera connected to the system has an issue.
	Check whether the video cable connecting the device and the camera is damaged.
	Check whether there is a cable with high voltage near the video cable. It can cause noise in the video or cause deterioration in the video quality.
	Check whether the video cable connected between the device and the camera is the cable for correct usage.
	If the power cable is used for the usage of video cable, it can cause noises in the video.
The sensor connected to the device is not working.	Check whether the sensor type set in the sensor setting menu is the same as that of the sensor.
	From the schedule management item of the recording setting menu, check whether the recording using the sensor is set up.
	Check whether the sensor is correctly connected to the ALARM-IN port.
PTZ camera connected to the device is not working.	Check whether the PTZ camera is correctly set up from the camera setting menu.
	Check whether the power cord of the PTZ camera connected to the system is correctly connected.
	Check whether the signal cord connected to the PTZ camera connected to the system is correctly connected.
	Check the channel the PTZ camera connected to the system controls.
	Check the user type. General user cannot use the PTZ function.

Symptom	Checkpoint and resolution
I cannot receive the E-mail sent from the device.	When the E-mail transmission fails without SMTP server setting. ● Check whether the network is set up correctly. ● Check whether the E-mail address is entered correctly. ● Check the spam mail setting for the entered E-mail address. (If the spam mail is set, some mails may automatically be deleted or classified into spam mail box etc.) ● Some SMTP mail server providers does not support sent email from the commercial SMTP server. In this case, use a public SMTP server.
	When the E-mail transmission fails even with the SMTP server setting. ● If you see a message saying "Please check the SMTP information or internet cable". -Check the SMTP server address.. -Check the SMTP port number. -Check the network setting. ● If the E-mail cannot be received without any error message. -Check the E-mail address of the recipient. -Check the spam mail setting for the entered E-mail address.
I cannot see the video screen connected with iPhone/iPod.	Check if wireless internet is available. ● If receive sensitivity is low, it can be disconnected or you cannot see the video.

5-2. Check before requesting for service

① List of recommended USB memory

Classification	Manufacturer	Model name	Capacity
1	ELECOM	MF-BU201GWH	1GB
2	BUFFALO	RUF2-E1GL-BL	
3	Scandisk	Cruzer Micro	
		Cruzer Micro U3	8/16GB
4	SONY	USM1GJX	1GB
		USM8GH	8GB
5	PRINCETON	PFU-STS1G	1GB
6	DATA	TB-ST1GB I-O	
7	FM Semiconductor	MLC gold	
8	SAMSUNG	SUM-M4GPV	4GB
		SUM-LWW	8GB
9	Transcend	JetFlash V10	
10	IMATION	Atom USB Drive MLC	
11	Sky Digital	SKY-DRVx2	32G
12	LG	XTICK	8GB

Reference:

- **Even when the USB memory listed in the above list is recognized in this device, it may not operate normally.**

Caution

- For some monitor TCs, the screen output size may not fit.
- For monitors that do not support resolution of 1920*1080, 1280*720, 1280*1024, 1024*768, the output may not be normal.

② List of supported PTZ camera

Protocol	Manufacturer	Pan/Tilt	Zoom	Focus	Iris	Preset	Tour
LG Multix_E	LG	x	○	○	○	x	x
LG Multix	LG	○	○	○	○	○	○
LPT-A100L	LG	○	x	x	x	x	x
LVC-C100/200HM/LG Electric Inc	LG	x	○	○	○	x	x
HSDN251 / Honeywell Co., Ltd	Honeywell	○	○	○	○	○	○
MD200/2000/1200/800/Sony Co., Ltd	Sony	○	○	○	x	x	x
New Born / NEW BORN HIGHTECH	New Born	○	○	○	○	○	○
WVCS850 / Panasonic	Dongyang	○	○	○	○	○	○
PLECO -D / PELCO Co.,Ltd	PELCO	○	○	○	○	○	○
PLECO -P / PELCO Co.,Ltd	PELCO	○	○	○	○	○	○
SCC - 641 / SCC-643 / SAMSUNG Co.,Ltd	SAMSUNG	○	○	○	○	○	○
SPD - 2300/3000/3300/ SAMSUNG Co.,Ltd	SAMSUNG	○	○	○	○	○	○
SUNGJIN / SUNGJIN Co.,Ltd	SUNGJIN	○	○	○	x	x	x
TPD7720 / DYNACOLOR, INC	DYNACOLOR	○	○	○	○	○	○
V1305R-DC / V1311RB/CRX-1013 / VICON	VICON	○	○	○	x	x	x

5-3. Initial setting list for factory default.

1 Step	2 Step	3Step	4Step	INPUT	Default
System	Overview	Auto-switching interval		1~30sec	10sec
		Main Output		On / Off	Off
		Button buzzer		On/Off	On
		Overwrite		On / Off	On
		Use data retain		On / Off	Off
		Retain day		1 ~ 90 Days	30 Days
		De-interlace		1~30 Sec.	10 Sec.
		Resolution		XGA(1024x768),1080P(1920x1080),720p(1280x720),SXGA(1280x1024)	XGA(1024x768)
		Audio output			Speaker
	Date/Time	Date			-
		Time			-
		Locale			
		NTP server		OFF time.nuri.net time.kriss.re.kr ntp.tmc.edu ntp2.ja.net stdtime.gov.hk time.service.uit.no pool.ntp.org	Off
		Format		MM/DD/YYYY DD/MM/YYYY YYYY/MM/DD AM/PM 24Hours	MM/DD/YYYY AM/PM
	F / W Update	File			Not existed
	SET UPDATE	Import		On/Off	Off

		Export		On/Off	Off
		Refresh			-
	Initialization	system log		-	Unselected
		settings		-	Unselected
		recorded data		-	Unselected
		Factory default		-	Unselected
		Rebuild Database		-	Unselected
Video/ Audio	Camera	Camera		1~4	1
		Camera name		CH1	CH01
		Audio 1		NOT USED / Camera 1~4	NOT USED
		Audio 2		NOT USED / Camera 1~4	NOT USED
	Recording	Camera		1~4	1
		Resolution		CIF/ HALF D1 / D1	D1
		Normal frame rate		OFF / 1 / 5 / 7.5 / 10 / 15 / 30	30
		Event frame rate		OFF / 1 / 5 / 7.5 / 10 / 15 / 30	30
		Quality		Very low Low Normal High Very high	Normal
	Schedule	Camera		1~4	1
				C/H/E/N	C
		Copy			
		Holiday			
	COLOR	Camera		1~4	1
		Brightness		0~255	112
		Contrast		0~255	128
		Saturation		0~255	112
		Hue		0~255	00
	PTZ	Camera		1~4	1
		Device name		LG-Multix_E LG-Multix LPT-A100L LVC-C100 HSDN251 MD200	Off

				New Born WVCS850 PELCO-D PELCO-P SCC-641 SPD-2300 SUNGJIN TPD7720 V1305R-DC OFF	
		Device id			0
		Baud rate		1200/2400/4800/9600/19200/38400/57600/115200	9600
		Touring interval		5 Sec 10 Sec 20 Sec 30 Sec 1 Min 3 Min 5 Min	1 Min
Event	Device	Alarm duration		Off/1~10sec	10sec
		Alert duration		Off/1~10sec	10sec
	Sensor	Sensor		1 ~ 4	1
		Channel		1 ~ 4	1
		Type		N.0/N.C	N.O
		Alarm		On / Off	Off
		Alert		On / Off	Off
	Motion	Camera		1~4	1
		Channel		1~4	1
		Motion zone			Select all
		Sensitivity		Very low Low Normal High Very high	Normal
		Pixel Sensitivity		Very low Low Normal High	Normal
		Alarm		01	Off
		Alert		On / Off	Off
	Video loss	Camera		1~4	1

		Channel		1~4	
		Alarm		On/Off	Off
		Alert		On/Off	Off
	Event filter	System start		On/Off	Off
		Shutdown		On/Off	Off
		Setting change		On/Off	Off
		Login/Logout		On/Off	Off
		Sensor detection		On/Off	Off
		Motion detection		On/Off	Off
		Video loss		On/Off	Off
		Alarm output		On/Off	Off
Network	TCP / IP	IP Configuration		Dynamic IP Static IP	Dynamic IP
		IP address			-
		Subnet mask			-
		Gateway			-
		DNS			-
		MAC address			-
		Web port			80
		Playback port			9091
		Live port			9092
		Upnp IGD			Disable
	Streaming	Camera		1~4	
		Frame		OFF/1/3/5/7. 5/10/15/30	7.5~
		Quality		VERY LOW LOW NORMAL HIGH VERY HIGH	NORMAL
	DDNS	Server			www.dvrname.net
		Mode		On/Off	Off
		Port			65500
		Domain			-
		Interval		1~60 Min	5 Min
	CMS	Mode		On/Off	Off
		IP address			-
		Port			0
	E-MAIL	Mode		On/Off	Off

		SMTP Server			-
		Port			25
		ACCOUNT			-
		PASSWORD			-
		SENDER			-
		RECEIVER			-
		E-MAIL TEST			-
User	User list	admin			admin
		guest			anonymous
		User1			user1
		User2			user2
		User3			user3
	Create user	User			User4
		Password			
		User Authority	MANUAL ALARM		Selected
			SEARCH		Selected
			BACKUP		Selected
			NETWORK		Selected
			MULTI LOGIN		-
			PTZ		Selected
			AUDIO		Selected
			CAMERA		All channel selected
		Auto logout		Off/5/10/30 /60min	Off
	Modify authority	SELECT USER			admin
		PASSWORD			000000
		User Authority	SETUP		Selected
			MANUAL ALARM		Selected
			SEARCH		Selected
			BACKUP		Selected
			NETWORK		Selected
			MULTI LOGIN		-
			PTZ		Selected
			AUDIO		
			CAMERA		Selected
		Auto logout		Off/5/10/30 /60min	Off

	Delete user	user1			-
		user2			-
		user3			-

5-4. Product Specification

MODEL	THR04	THR08
OPERATING SYSTEM	Embedded Linux	
COMPRESSION	H.264 HARDWARE CODEC	
MULTIPLEX FUNCTION	Live, Record, Backup and Network at the same time	
RECORDING RESOLUTION	960H, D1, Half D1, CIF	
RECORDING SPEED	120fps(NTSC), 100fps(PAL) at 960H, D1 Resolution	240fps(NTSC), 200fps(PAL) at 960H, D1 Resolution
VIDEO INPUT	4 BNC Composite	8 BNC Composite
VIDEO OUTPUT	1 HDMI, 1 VGA, 1 BNC	
AUDIO INPUT/OUTPUT	2 line/ 1 line	
SENSOR INPUT / ALARM OUTPUT	4 line / 1 line	
Display Mode	1/4 and auto sequential	1/4/9 and auto sequential
BACKUP MEDIA	USB storage, Network	
STORAGE MEDIA	1 SATA HDD	2 SATA HDD
RECORDING MODE	Continuous, Alarm, Motion, Instant panic	
OPERATION CONTROL	Mouse and Remote controller	
COMMUNICATION PORT	RS-485	
NETWORK	LAN(Ethernet RJ-45, 10/100 base), DDNS, TCP/IP	
SIZE(mm)	278(W)x215(D)x48(H)	319.5(W)x251.5(D)x48(H)
WEIGHT	1.3Kg	2.5Kg
POWER	DC12V/3A ADAPTER	DC12V/4A ADAPTER
POWER CONSUMPTION	Max. 12W	Max. 18W
OPERATING TEMPERATURE	0°C ~ 40°C	
OPERATING HUMIDITY	0% RH ~ 80% RH	

※ The detail and specification of this product can partially change for quality improvement.